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BIG GAME SHOOTING

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TO THE
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CROSSING THE FORD.

THE "COUNTRY LIFE"

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BIG GAME . SHOOTING

EDITED BY

HORACE G. HUTCHINSON .



FIRST VOLUME OF

THE LIBRARY OF SPORT

LONDON: PUBLISHED AT THE OFFICES
OF "COUNTRY LIFE," LTD. TAVISTOCK
STREET, COVENT GARDEN, W.C., & BY
GEORGE NEWNES, LTD. SOUTHAMPTON
STREET, STRAND, W.C. NEW YORK:
CHARLES SCRIBNERS' SONS MCMV

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INTRODUCTION

IT rather seems as if we were coming just now to something like a parting of the ways in the history of the Big Game of the world. For many years, ever since the introduction of efficient firearms, man has been shooting beast to such an extent that it seemed likely that the future author who took up his pen to write about Big Game would be able to dispose of them as briefly as the scribe of the famous chapter on snakes in Iceland. Thanks, however, to an appreciation of the imminent risk of this extinction, and partly to some very striking object lessons, such as the extermination in the unprotected state of the American bison, more or less stringent game laws, more or less thoroughly enforced, are now the rule rather than the exception over the greater part of the globe. In response to this enlightened legislation the Big Game seem to be entering on a new lease of life; in many parts their numbers are more than maintained, they show distinct increase, and the

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writers of the following chapters have found no lack of material for their treatment.

It is not my business to appraise their work. Their names stand sufficiently high as names of experts in the departments that they deal with respectively, to make any such attempt at laudation an impertinence. At a moment when the deterioration of the Highland red deer is so much discussed, the views of Sir Allan Mackenzie, looking from the Highlands, and those of Mr. C. J. Lucas, from the English park where the finest deer of our islands are bred, cannot fail to be of rather peculiar interest. If there is any other collaboration in which there is just cause to take special pride it is in that of Mr. A. S. Reed, the sportsman whose name stands so very high with all who have ever shot the Big Game of the North American continent, but who has never before been induced to put pen to paper to give the public the benefit of any of his experience. It is to Mr. Clive Phillipps-Wolley, who has himself contributed many delightful chapters on the American Big Game, that we owe both Mr. Reed's help and that of Mr. Warburton Pike. Together with Captain C. E. Radclyffe and Sir Henry Seton-Karr, these writers cover the whole of the big continent ; and the last-named sportsman has assisted in the European portion also with accounts of red deer and their shooting on the continent of Europe.

Captain Radclyffe, at the moment of writing, is the last to return from a very successful shooting-trip in Alaska, of which he has given a detailed account in his *Big Game Shooting in Alaska*, published by Mr. Rowland Ward. With Mr. Abel Chapman and the writers before named, the total of those who have treated of such Big Game as still remains in Europe is complete. Mr. Bryden is in the proud position of taking the whole of Africa as his province, and Asia is shared (but the former has the lion's share) by Major Cumberland and Mr. Cuming. It is obviously impossible, within limits of a work of reasonable size, to give an account of the hunting of every animal that may be the mark of the sportsman's rifle, but it is believed that no animal is omitted which the British sportsman is at all likely to make the special object of a shooting expedition. The chapters of Mr. Fremantle and of Messrs. Ross on sporting-rifles and telescopes are applicable to all lands alike ; and thus the whole world-wide field of the Big Game shooter is covered, and we may say with some confidence that not a head of game of importance has been missed.

No prominent feature has been made in the illustrations of exceptionally large heads or specimens, because so very little justice can be done to their proportions in a picture. The aim has rather been to show the wild animal, as often as possible,

in its native habitat, and to this end use has been made of many photographs not especially taken to illustrate the text of the present authors, but in almost every instance taken by men who were themselves experienced Big Game shooters, and understood the most characteristic moments and attitudes for the use of the camera. In the African section special attention is due to the illustrations from photographs and telephotographs taken by Mr. R. Wright in his expeditions to Central Africa and Rhodesia, and in the African section to the unique series of wild elephant pictures kindly supplied by Sir William Garstin. In other parts of the book we are indebted for various photographs to Mrs. Alan Gardner, Mrs. F. D. Godman, Mr. E. A. Stonor, Major Bonham Christie, Captain C. E. Radclyffe, and Messrs. G. B. Crozier, E. L. Ireland, H. C. Nelson, A. C. Oddie, F. Russell Roberts, W. G. Walker, and A. G. Wallihan. Special thanks also are owing to Sir Edmund Loder, Bart., and Major C. S. Cumberland, who kindly allowed photographs to be taken of their fine trophies.

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PART I

Univ of
California



BREAKING UP CAMP—SOMALILAND.

PART I



CHAPTER I

SPORTING RIFLES, ETC.

By the Hon. T. F. FREMANTLE

SPORT, like work, largely depends for its result on the perfection of the tools employed, as well as on the skill and care with which they are used. While there are some games, such as football, in which the human factor is everything, in others, such as golf or billiards, the limits of what it is possible to accomplish have been much extended by improved appliances. The same is true of rifle shooting, whether for practice or in earnest, in an even larger degree, and though we cannot claim to have reached perfection in our weapons, we are immeasurably nearer to it in all respects than was formerly the case.

There are few departments of invention in which the nineteenth century showed greater progress than in firearms. Much has been accomplished which to

our ancestors would have appeared incredible. The shooter was heavily handicapped by his weapon a hundred years ago, and was indeed little better off than his predecessor of the beginning of the eighteenth century. The round rifle ball, sometimes wrapped in a patch of silk, had to be forced into the grooving, an operation which after a few shots became very difficult owing to the obstruction offered by the fouling. To load correctly from the powder flask was not easy in wet or windy weather, or with numbed fingers. The ramrod had to be withdrawn from its place beneath the barrel in order to load, and to be returned before the shot was fired. The rate of fire was very slow, and accidents in loading were not uncommon. Priming the pan was a separate operation. The adjustment of the flint had to be looked to, otherwise miss-fires were more than probable. Every shot was, as a matter of course, what we should call a bad hang fire. The sportsman was at the mercy of the weather, for rain and moisture made it more than doubtful whether the charge would ignite. The double rifle was not often used; the single rifle was clumsy. The ball-bag and powder flask were cumbersome to carry. It was hard to get powder of even make, and the accuracy was only moderately good. The velocity was low, and the trajectory so much curved as greatly to limit the effective range. The shot when fired was not as a rule immediately fatal even to such an animal as a deer, still less was it capable of stopping the rush of large or dangerous game. The wounded hart

would often travel for miles, and it required all the resources of the stalker's art, aided by one or more hounds,¹ to bring him to bag. Shooting game with the rifle was, in fact, a slow, laborious, and uncertain process.

Since then the development of the rifle has passed through many stages. The invention of breech-loading, and of the elongated bullet, followed at length by the reduced bore, the increase of velocity and the expanding bullet of the breech-loading Express rifle ; magazine-loading ; smokeless powder ; the sheathed bullet giving extreme penetration, or as little as may be desired,—these successive improvements have placed in the hands of the sportsman of to-day weapons suitable for any given purpose, and superior to those of former times. How different is his lot from that of his predecessors ! The rifle is compact and light, so is the ammunition. Loading is an instantaneous process, and an unlimited number of shots can be fired in very rapid succession. The cartridges are proof against wet, and will stand almost unlimited rough handling. So perfectly are they made that a single miss-fire in several hundred shots gives cause of complaint against the ammunition maker. There is no perceptible interval between the pulling of the trigger and the discharge of the shot. The kick or blow of the recoil on the shoulder is comparatively trifling. The bullet has a high velo-

¹ *E.g.* Christopher Idle, writing on deer-stalking in 1855, says: "You should always have a good deerhound in the rear, ready for the pursuit, this ally being indispensably necessary to secure your complete success."

city, and owing to its shape, maintains it infinitely better than the old round ball. Consequently the trajectory is flatter, and accurate judgment of the distance of the mark has ceased to be essential, unless for an unusually long shot. Finally, the effectiveness of the charge can be proportioned to the end in view with the greatest nicety, and the present-day hunter can stand up to the largest or most dangerous game with the greatest confidence, so powerful and so absolutely under command is the machinery of destruction which he holds in his hands. It is due to the command of material given by modern science, allowing a close adaptation of the means to the end, that the precise power needed to produce any given effect can be exactly estimated, and weapons designed accordingly. If we examine the question, we find that the full effect of the bullet is expended upon the animal fired at only if it does not effect complete penetration. It has well been said that the ideal charge will propel the bullet with such force that after expending all its energy in the thickness of the body of the animal for which it is intended, it will lie under the skin on the side opposite to that at which it enters. With modern rifles the penetration is far more than is necessary for soft-skinned game, and it has to be modified by varying the structure of the bullet so that it opens under the resistance of the bones and tissue which it meets with in its passage. By thus modifying the bullet, the great power which can be developed in a modern rifle of small calibre can be utilised.



A DEAD PRONGHORN BUCK.

TO THE
AMERICAN



SOMALILAND RIFLEMEN.

In the days when solid spherical bullets only were used, much of the effectiveness of the shot depended on the area of the bullet, for a big bullet made a big hole, and thus caused more widespread damage than a small one. Sir Samuel Baker and others found the advantage of using solid bullets of soft rather than of hardened lead, to ensure their deformation, and thus to obtain an increased effect. The development, first of the hollow, and then of the sheathed or compound bullet, enables a much smaller calibre to be used than was formerly the case with no loss, but rather an increase of power. The bullet, after entering, is forced by the resistance to spread out, and thus involves in its course much more of the nerves, blood-vessels, and bones, than its original diameter would compass.

It is not many years since the best weapon for deer-stalking was an Express rifle of .450 calibre, firing a heavy charge of black powder. The winning rifle of this type in the Field Trials of 1884 was made by Messrs. Holland. Its bullet weighed 322 grs., and its velocity at the muzzle was 1776 feet per second. Its striking energy¹ was thus 2254 foot-pounds at the beginning of its flight. At 150 yards its remaining velocity was 1335 feet per second, giving a striking energy of 1274 foot-pounds—amply sufficient, if expended in the right place, to do

¹ Striking energy varies directly as the mass of the projectile, but as the square of the velocity. Thus doubling the weight of the bullet, other things being equal, will double the blow; but doubling the velocity multiplies the blow by 4, trebling it multiplies the blow by 9, etc.; hence the great power of the modern weapons.

the work required. This represents a very much higher power than was available in muzzle-loading rifles of similar calibre. The tendency to reduce the bore led to the development of the .400 Express, while black powder was still in the ascendant. This was an excellent rifle for stalking, although it did not come very largely into use.

The adoption within the last twenty years, for military purposes, of rifles of a calibre of 8 millimetres ($\cdot 315$ inch) or less was made possible by the progress made in the manufacture of smokeless propellants. Thus it is that the deer-stalker of to-day has discarded black powder rifles in favour of such weapons as the .303, the .275 Mauser, and the .256 Mannlicher. These all have a flatter trajectory than the old Express rifle, and are therefore effective at a longer distance. Their accuracy is greater. Their ammunition is lighter, though this, as regards stalking in these islands, is but a small point. They have not the heavy recoil which made the Express rifle so unpleasant to the firer. There is no cloud of smoke to advertise to the quarry the direction from which the shot has come, or to hamper the rapid discharge of successive shots.

These rifles are at least as effective to kill as the old Express. Their power is approximately as follows :—

[TABLE.]

TABLE OF ENERGY

Calibre.	Weight of Bullet.	Velocity at Muzzle.	Striking Energy.	
			At Muzzle.	At 200 yds.
.303 Lee-Enfield	215 grs.	2000 ft.-secs.	1908 ft.-lbs.	1335 ft.-lbs.
.272 Mauser	172 „	2200 „	1847 „	1264 „
.256 Mannlicher	162 „	2400 „	2070 „	1442 „

It is evident, then, that these rifles, though of so much smaller bore, are not lacking in power nor in other good qualities. The velocity being high, and the bullet of good length, the first part of its flight approaches much more nearly to a straight line than was the case with the older rifles. If a shot is fired at 200 yards, the height reached by the bullet when half-way through its flight is only, in the case of the .303, $5\frac{1}{2}$, and for the Mannlicher, $4\frac{1}{4}$ inches. The whole path of the flight of the latter bullet in the first 300 yards of its flight would be within the limits of a straight pipe of 12 inches' diameter, while the curve of the .303 is about 3 inches higher. That of a normal Express of the old type is a little over 2 feet at the same distance. No wonder that those who have experienced the change to the new type of rifle have been surprised at the long distance at which they can make certain of a shot. It is usually that part of the approach which is within 200 yards of the stag that is the hardest part of the stalk. It may fairly be said that the modern rifles have extended the deadly zone in stalking by 70 to 100 yards.

120 yards is no longer far enough to make a shot risky, and the sportsman who has confidence in himself can sometimes escape the unpleasantness of a long wait on a beast lying down, with only the chance of his offering a good shot if roused, by killing him as he lies in a way which would have been almost out of the question with the old Express.

The relative advantages of double and single rifles for stalking have been subject of argument for many years. The writer, with many others, finds that the single barrel with four or five shots in reserve in the magazine gives as convenient and deadly a distribution of fire as can be desired for deer-stalking. It has been urged as an objection to the magazine that it sometimes leads to a hurried pumping of lead after an animal already out of range. Such a proceeding is entirely reprehensible and unworthy of the true sportsman, one of the first of whose qualifications is self-restraint. The slight noise made in reloading from the magazine may be enough to disturb game, but if the habit be formed of reloading immediately after pulling the trigger, the noise is lost in the reverberation of the shot which has been fired.

Those accustomed to double rifles and loth to give up the convenience of having a second shot at command without having to take the weapon from the shoulder, will still use the double barrel in preference to the magazine rifle for deer-stalking. But it is more expensive and heavier than the single, while the precise adjustment of both barrels to the same sighting is difficult to accomplish, and may possibly

be disturbed by a blow or a fall. When dangerous game is in question, the power of firing a second shot by the mere shifting of the forefinger to the second trigger becomes so important that the advantages of a magazine take the second place.

Between one modern magazine action and another there is but little to choose. The ordinary pattern of the .303 magazine holds 10 cartridges, and the magazines of the Mauser and Mannlicher 5 each. But almost any combination of barrel and action can be arranged at a little extra expense. In recharging the magazine, the insertion of a fresh clip-full of cartridges (as in the Dutch or Roumanian pattern of Mannlicher) is a more silent operation than stripping the cartridges into the magazine from a charger, as in the Mannlicher-Schönauer or the Mauser. The recharging of a magazine of the Harris type with loose cartridges can be done very quietly, but requires care. The larger number contained in the .303 magazine might appear to be a convenience in this respect, but this magazine was designed for military purposes, while in deer-stalking occasions on which more than five shots are fired in quick succession are so few as to be negligible. A large projecting magazine makes the rifle unhandy. Magazine actions of standard military patterns are now made by machinery in large quantities very accurately to gauge, and with the various parts interchangeable. This fact accounts for the comparative cheapness of magazine arms for sporting purposes, and has given a starting-point from which rifle-makers have

exercised great ingenuity in giving a perfect finish to all the various details of stock, barrel, and sights.

No distinction need be made on the score of safety between one breech-action and another, provided that the weapon be obtained from a reliable maker, and that standard charges be used with it. The falling block action for the single barrel can be made stronger than the bolt action, or the breakdown double-barrel action, but the two latter have an ample margin of strength for all reasonable contingencies. All sporting rifles must, of course, be provided with simple and effective safety bolts.

It may here be remarked that magazine systems largely depend for their advantage on the cartridges being of a moderate size. Magazine-loading, as opposed to the use of the double barrel, is not worth any great sacrifice of handiness, and large cartridges entail a large magazine and a heavy bolt. The weight of the cartridges in the magazine has to be taken into account in computing the weight of the rifle as it is to be carried. It is therefore not usual for magazines to be fitted to rifles of larger bore than .300 to .350.

The fit of the stock is a matter of importance, especially for shooting quickly at a moving or disappearing object. The rifle must therefore "come up" well, and the stock should be properly fitted to the build and habit of the shooter. It should be very similar to that of the shot-gun used by the individual, but with this difference, that while with the shot-gun many men keep the head up and look

quite above the barrels in aiming, with the rifle it is absolutely necessary that the eye should be lowered so as to align the sights correctly. It is well known that with the shot-gun a straighter stock is suitable for overhead shots than for shots at ground game, and the stock of a rifle may with advantage be somewhat more bent than that of the average shot-gun.

The pattern of the sights to be put on a rifle depends largely on individual taste. There are many kinds of sights, and all have their good points. The first essential is that the foresight should be so far as possible clearly seen and at once aligned correctly with the backsight in all varieties of light. The backsight, if of the open kind, should be placed on the barrel well forward (within reasonable limits) from the eye. Any increase in accuracy arising from an increased radius between the foresight and the backsight is more than counter-balanced by the blurring and indistinctness of the latter if it is not far enough from the eye. The difficulty of a blurred backsight, always present in some degree, is much greater for middle-aged than for young eyes, and the trouble of a little special attention to this point will in many cases be amply repaid.

Of the form of the foresight not much need be said. Experience has decided that it is most quickly and easily seen if of the bead type, presenting to the eye the appearance of a small disc on the top of a narrow stem. The stem has considerable depth

“fore and aft,” to compensate so far as may be for its unavoidable weakness laterally. The actual bead is usually made of ivory or faced with white enamel, so as to show clearly in a dull light or against a dark background. There seems to be no colour which will show really well under all conditions, and the white bead has been found to be more generally visible than any other. It should be protected from the effects of a blow or a fall by a removable hood or by horns projecting upwards on each side of it. If a foresight of metal is preferred, or has to be improvised, the tip should be cut at an angle of 45° so as to reflect the light from the sky towards the eye, and kept well polished. A foresight of copper has been preferred by some sportsmen as being of a distinctive colour.

The best shape and size of the notch in the open backsight, through which the foresight is aligned, depends largely on individual taste and habit. But the inexperienced sportsman who takes the advice of a good rifle-maker can hardly go wrong. It helps the eye to centre the foresight accurately if a bright platinum line leads up to the bottom of the notch. Instead of the line a white triangle is sometimes inserted under the notch to lead the eye quickly to the centre, and is more easily seen than a line by middle-aged eyes. There is no end to the refinements—more or less fanciful—which have been applied to sights. For shooting in a bad light, diamond sights have sometimes been used; for shooting in the dark, luminous paint or minute

electric lamps. For the latter purpose, white tape or string twisted round the barrel over the sights is sometimes found useful. A comparatively large white bead, folding down in front of the ordinary foresight so as to be flush with the rib or barrel, and capable of being raised in an instant, is sometimes fitted and is very convenient.

Some sportsmen prefer an aperture backsight to the open one, and the Lyman backsight is not uncommonly fitted to sporting rifles. There were objections to its use with the Express rifle, as it is of little use if not within 3 or 4 inches of the eye, and there was danger of the heavy recoil carrying it back against the eye if the rifle were held carelessly in picking it up for a quick shot. There is little of this danger with the rifles of which we are now speaking. The aperture sight can be used under almost all circumstances, and its advantages in lessening the difficulties of aim are especially helpful to old eyes. It is usually fitted on the small of the stock close in front of the grip, but this arrangement is not very convenient in the case of a rifle with a bolt action, as it is pushed over backwards as the bolt is drawn back, and has to be raised again for the next shot, unless fitted with a spring to lift it. The trouble of raising it again amounts practically to very little, but attempts have been made to avoid it by placing the sight on the bolt itself, or by attaching it to the side of the action so that it projects laterally above the bolt. There are, however, drawbacks to both these arrangements.

However the aperture backsight be fixed, it does not altogether supersede the open backsight, and the latter, carefully adjusted, but folding down so as not to be in the way, should remain on the rifle. To one rule there is no exception, that the lowest elevation which the sight, whether open or aperture, allows should be a fixture, and should give, with high velocity rifles, the correct sighting for about 100 yards. It will then be available for any distance short of that, and a high aim will give the necessary allowance up to about 200 yards if a quick shot has to be fired. The correct sighting for a long shot should, however, be carefully given by raising the proper leaf of the open backsight, or by adjusting the Lyman sight by its elevating screw. One turn of this screw will usually give about 5 inches' elevation at 100 yards, 10 at 200, and so on, but the precise amount depends upon the actual distance between the sights.

Telescopic sights are excellent for stalking, and a very few sportsmen habitually use them in preference to other sights. They are especially good for a long shot or when the mark is indistinctly seen. They are perhaps less suitable for a running shot than the simpler sights. They require more constant checking, to see that they remain in proper adjustment, than the more simple sights, and they should never be fitted to a rifle to the exclusion of aperture or open sights. To this end they may in the case of a single rifle conveniently be fitted to one side of the action, so as not to obstruct the view of the ordinary

sights. It is important that the attachment and detachment of the telescope should be very simply and rapidly effected, and that the fitting should not be liable to become loose from the effects of wear. The tube should be as short and light as possible; the field of view should be large, and the magnifying power not too high. A power that enlarges two and a half to four times will be ample. To keep the tube from touching the eye during the recoil, the lenses should be so arranged that the focus for the eye is from 3 to 5 inches clear of the tube. In view of the advantage given by the telescope to those whose sight is not up to the best standard, it is perhaps remarkable that it is so little used. It is, however, less available in rain or mist than the ordinary sights. There is at the present time an increasing tendency to the use of telescopic sights, due no doubt to the great accuracy and increased range of modern weapons.

Much of what has been written above applies to sporting rifles for use in all parts of the world and against all kinds of game. But the weapon itself must be modified for game of different kinds. Largely as a result of the late Sir Samuel Baker's experience, heavy rifles of large calibre were first made for use against elephants and other tropical animals. 4-bore and 8-bore elephant rifles are well-known weapons and have been widely used. But their great weight and punishing kick have always limited their utility. It is true that Mr. Selous—a past master of the hunter's art—has found

it possible to kill elephants with the single black-powder .450 rifle and solid bullet, and that they have since been killed with the .303 by him and others. But the average man who feels that he cannot trust himself to direct his bullet to an inch when in overwhelming peril, wisely prefers a weapon, the power of which leaves him a margin to spare, and which will give an effective shock so long as the bullet reaches some part of its mark.

The power of the large bore rifles formerly made was very great. The 8-bore entered in the Field Trials weighed from 17 to $17\frac{1}{2}$ lbs., and fired 10 drs. of powder and a conical bullet of 1257 grs. with a velocity of 1500 f.-s. This represents a very heavy striking force of 6273 foot-pounds at the muzzle, and of 4511 at 100 yards, the remaining velocity being 1272 f.-s. The 4-bore fired a conical bullet of 1882 grs., the powder charge being 12 grs. This gave a muzzle velocity of 1330 f.-s., with energy 7387 foot-pounds, and at 100 yards a velocity of 1160 f.-s., with energy 5619 foot-pounds. But these small cannon, for such they practically are, weigh heavily. The double 8-bore scales from 17 to 18 lbs., the single 4-bore about 20 lbs., and the double 23 to 24 lbs. The hunter cannot himself carry such weapons, and they are inconvenient for a quick shot. In effect, many sportsmen preferred to take the risk of shooting big game with a .577 Express, as being, if less powerful, more available because more portable. The very heavy rifle was too often in the hands of a frightened gun-bearer at the precise moment when it



A HUNTER'S CABIN—CALIFORNIA.



CANADIAN SHOOTING BOX.

was most wanted. The more fortunate modern hunter of big game arms himself with a rifle firing smokeless powder or cordite, of much the same calibre as the old Expresses. Owing, however, to the much higher velocity, which is given to the heavy bullet used, the effect is immensely increased in comparison. Thus a .450 rifle carrying a bullet of 480 grs. gives to it a velocity of 2050 f.-s., which represents a muzzle energy of 4475 foot-pounds, or more than double that of an old Express rifle or the .303. A double rifle of this description will weigh $10\frac{1}{2}$ to 12 lbs., and is thus far more manageable than the 8 or the 4-bore, while it gives ample power to deal a crushing blow to the largest game.

These rifles, depending as they do upon velocity to compensate for lightness of bullet in the development of power, have the advantage that they give a very flat trajectory at sporting distances and well maintain their velocity. They possess in this respect all the merits of weaker rifles such as the .303, and thus enable full advantage to be taken of their power at the longer sporting distances. One big-game hunter after another has been delighted to find them effective for elephant, rhinoceros, buffalo, giraffe, tiger, lion, moose, etc. The .450 is amply powerful enough for such game, and though a similar rifle of .500-bore is sometimes made, its weight, if it is to fire a proportionate charge, makes it unhandy, while its increased power is not necessary.

Where great penetration is desired, the bullet has the envelope of soft steel or cupro-nickel completely

covering both its nose and its sides. If it is desired absolutely to prevent the deformation of the bullet, the envelope can be strengthened by an additional cap of hard metal, or its fore part may be thickened at the nose. Where it is desired that the bullet should mushroom easily, so as to expend all its force on soft skinned and small game, the envelope is usually put on the bullet from the base, so as to leave the lead bare at the nose.¹

If a still greater amount of expansion is desired, the bullet may be made with a hollow in the centre of the nose, extending some distance into the core. The longitudinal slitting of the envelope between the shoulder and the tip, with fine straight or spiral saw cuts in three or four places, is another means of assisting expansion by weakening the envelope. These various means are all available, singly or in combination, to suit the projectile to special purposes. Further to reduce penetration in shooting such game as the smaller antelopes with the more powerful rifles, a specially short and light bullet may conveniently be used, provided that the normal sighting can be used with it for the first 200 yards of its trajectory.

For rifles larger than the .303, cordite may be said to be the only explosive used at the present time. It is very stable, and the effect on it of changes of temperature is very slight. It gives good results in arctic as well as in tropical climates, and by varying its size and form its rate of ignition can be con-

¹ The ordinary bullet with the nose completely sheathed can, if necessary, be made to expand by filing away the sheath at the tip, so as to expose the lead.

trolled, and it can be made suitable for use in a weapon of any calibre.

Big game are often shot with the "Paradox" and other similar guns, which fire small shot or a conical bullet, and which give a spin to the bullet by grooving in a choke near the muzzle, or by extremely shallow grooving extending nearly the whole length of the barrel. Such weapons, if of 8 or 10-bore, and arranged to fire cordite cartridges, are extremely powerful, while the recoil is some 20 per cent less with smokeless than with black powder. They are far less heavy than rifles of similar calibre, and are capable of dealing with the heaviest game when fired with hardened or coated bullets. Tigers have often been shot with the 12-bore, and the 16 is equal to dealing with such game as bears or pig. For shooting in the jungle, those weapons, "contrived a double debt to pay," are likely to be always in special demand.

There is a class of rifles intermediate between the .303 and the larger rifles of .450 and .500-bore. These, of .350, .360, .375, or .400-bore, are made by various firms, and are preferred by some sportsmen for deer-stalking or for the heavier antelopes, water-buck, etc. Much depends on individual experience: the man who has had unlucky experience with the .303 or Mannlicher, in his first few shots at such game, will hold a very different opinion of the efficacy of these small-bores from him in whom early success has inspired faith.

It used to be necessary for the hunter of big game

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to take with him a considerable assortment of rifles suited for the various animals which he expected to meet with. The battery of rifles, for instance, recommended only a dozen years ago in the excellent book of the "Badminton Library" on *Big Game Shooting for East Africa*, is as follows :—

A single 4-bore rifle.

A double 8-bore.

A double .500 Express.

A single .450 Express.

A .295 rook rifle.

By taking a proper assortment of cartridges we may substitute for this list :—

1. A double rifle of .450 to .500-bore for big game of all kinds.

2. A magazine rifle of .256 to .350-bore for deer and smaller quadrupeds of all kinds.

Rifles for big game shooting, being liable to falls and heavy blows, require to be made with all possible strength. Some hunters like to have the small of the butt protected and strengthened by thin steel plates properly shaped and secured by screws. These are a great safeguard, as the "grip" is the weakest part of the stock. If the stock be not thus strengthened, the straps which extend behind the action above and the trigger guard below, may well be extended past the weakest part of the stock. There is no difficulty in fitting a spare barrel to a single rifle, so that in case of damage it may be substituted for the original barrel. It is also possible to have barrels of different bores

made so as to be interchangeable in the same action, but speaking generally, this involves undesirable complications.

To take one or two spare rifles similar to those in use is very necessary. This is better than to depend on spare barrels, as, in case of anything going wrong, the mishap is more often in the action or lock than in the barrel itself. It is necessary, however, to take several spare sights in case of breakage. Various spare parts of lockwork and extractors should, of course, be taken, with any necessary tools for inserting them—tools such as are used in the workshop on the back premises rather than such as are displayed in the show-cases behind the counter. One or two lessons in “stripping” the locks and actions and reassembling the parts will well repay the trouble taken. It should be needless to say that all possible pains should be taken to keep rifles properly cleaned and their mechanism in good order. Vaseline, which may be bought cheaply in tins of 1 lb. or more, is excellent for cleaning and preventing rust.

In buying an outfit of rifles and accessories it is as well to go to a firm which actually makes rifles rather than to one which merely deals in them. A maker who has ample personal experience, if not of big game shooting, at all events of target work, and of rifles of all kinds, can give far better advice than the mere glib shopman or agent. In the case of a large business with a first-class reputation, the result of the shooting experience of the designers and users of the rifles has been crystallised into certain types

from which departure should not lightly be made, unless in small details, and after careful consultation with one of the practical men of the firm. The novice who has no experienced friend to advise him, cannot do better than place himself almost unreservedly in the hands of one of the first-rate makers of rifles. He should remember that cheapness may be dearly bought. The advice which Polonius gave Laertes as to dress, "Costly thy habit as thy purse can buy," may be applied not unreasonably to the purchase of weapons, for it has in it an important truth. The complete efficiency of a rifle demands careful finish and most careful testing. Its perfect sighting requires an ungrudging expenditure of time and ammunition. Its powers of endurance, of standing hard wear without a breakdown or causing trouble, depend on the precise shaping and temper of each component part; and high-class work, thoroughly conscientious both within and without, is always costly. It is in the details which do not come under the eye of the user that economy is usually made, and if these are to be good all through, as they should be if ill chance is to be minimised, a proportionate cost must be faced. A misfire or a failure occurring at a critical moment may put the sportsman in the greatest personal danger, or it may rob him of his chief chance of success. It is therefore bad economy to get weapons from some source removed from the purchaser's personal touch merely for the sake of cheapness. The private recommendation of a friend, or the public one of a man of independent position who has



A SHOT IN THE EARLY MORNING—NEWFOUNDLAND.

TO MINE ANTHROPOLOGY



BLACK BUCK ANTELOPE.

been well served, and that recently, is worth many columns of self-laudatory advertisement.

It cannot be too strongly urged upon the novice, that it will amply repay him to make himself thoroughly familiar with his own capabilities and those of his rifle at home before he actually embarks on the pursuit of game. In the first place, he cannot afford to be hampered at some critical moment with any difficulty due to a want of familiarity with the manipulation of the action or the safety bolt, the feel of the trigger, or the adjustment and appearance of the sights. Next, he needs to have had it brought home to him by the stern experience of the target, in some form of rifle practice, that unless he takes real pains to direct the bullet to the point that he wishes to strike, it will not once in a hundred times strike that point. Let him handle his rifles, and become familiar with the feeling of them, till the sights come up infallibly in the proper alignment* to the eye. Such preparation will repay him a hundredfold on the veldt or in the jungle. Nor let him be disheartened if he have difficulty in attaining at the target the standard of the most skilled marksmen among his friends. Very difficult shots have sometimes to be taken, but the bulk of the shots at large game are taken under circumstances in which the necessary accuracy is but small, so long as the nerve to fire them with some degree of care holds good. Quickness and coolness are the chief requisites in killing dangerous game ; absolute accuracy has in the jungle and at close quarters less value than at the

longer distances at which game has to be shot on bare plains or hills. It is the man behind the gun far more than the weapon itself on whom the result depends, but to do the best work the best tools are indispensable.

Particulars of Standard Charges and Velocities of Express Cartridges for Rifles of larger Calibre than .315 in., and firing Cordite. Barrels 28 in. long. Temperature 60° to 70° Fahr. From materials furnished by Messrs. Eley and Messrs. Kynoch.

Calibre, inches.	Length of Shell, etc.	Cordite, grains.	Bullet, grains.	Velocity at Muzzle, feet per second.	Energy at Muzzle, foot-pounds.
.600	...	110	900	1950	7292
"	3 in.	100	900	1850	6831
.577	3½, 3 in.	100	750	2050	6990
"	3½, 3, 2½ in.	90	650	1950	5483
.577, .500	3½ in.	90	570	2150	5857
.500	3½, 3 in.	80	570	2050 to 2150	5314 to 5857
"	"	75	480	2050	4475
.500, .450	3½ in.	70	480	2050	4475
.450	No. 2	80	480	2175	5437
"	3½ in.	70	480	2150	4922
"	...	70	420	2125	4207
.450, .400	3½ in.	60	400	2150	4100
" ¹	3 in.	"	"	2125	4007
"	...	"	365	2100	3570
"	2½ in.	42	400	1700	2564
.375	...	40	320	1900	2562
"	...	"	270	2000	2396
.400, .360 ¹	...	41	314	1875	2450
"	...	40	300	1950	2464
.360	No. 2	55	320	2200	3436
"	2½ in.	30	300	1650	1812
.350 ¹	...	43	310	2000	2787

¹ Special patterns of certain firms.

SPORTING RIFLES

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TRAJECTORY TABLES

Of .303 and .256 rifles, to 350 yards, showing the height of the bullet above or below the line of aim when elevation is given for any even distance of 50 yards.

The measurements are given to the nearest $\frac{1}{16}$ of an inch. Those in italic are *minus* quantities, *i.e.* the bullet is below the line of aim. N.B.—No allowance has been made for height of foresight above centre of bore.

.303 RIFLE, 215 GR. BULLET, MUZZLE VELOCITY 2000 F.-S.															
Elevation given for	0	50	100	150	200	250	300	350							
Height of Bullet at	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.						
50	1.1	..	1.2	2.5	3.9	5.5	7.2	9.0							
100	4.6	2.4	..	2.6	5.5	8.6	11.9	1	3.5						
150	10.0	7.5	3.9	..	4.3	9.0	1	2.0	1	7.3					
200	1	8.2	1	3.8	11.0	5.7	..	6.2	1	.9	1	8.0			
250	2	9.0	2	3.5	1	9.5	1	2.0	7.8	..	8.3	1	5.3		
300	4	1.7	3	7.0	2	11.8	2	3.9	1	7.9	10.0	..	10.7		
350	5	10.4	5	2.7	4	6.3	3	9.1	2	11.0	2	.2	1	.5	..
Angle used	2'.1225	4'.41	6'.9225	9'.66	12'.6225	15'.81	19'.2225								

.256 RIFLE, 156 GR. BULLET, MUZZLE VELOCITY 2350 F.-S.															
Elevation given for	0	50	100	150	200	250	300	350							
Height of Bullet at	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.						
50	.8	..	.9	1.9	3.0	4.2	5.5	6.9							
100	3.5	1.8	..	2.0	4.2	6.6	9.2	1	..						
150	8.2	5.7	3.0	..	3.3	6.9	10.8	1	3.1						
200	1	3.3	11.0	8.4	4.4	..	4.8	10.1	1	3.7					
250	2	1.1	1	8.0	1	4.5	11.5	6.0	..	6.5	1	1.6			
300	3	2.0	2	9.0	2	3.6	1	9.7	1	3.1	7.9	..	8.5		
350	4	6.2	4	0.4	3	6.1	2	11.2	2	3.5	1	7.1	9.9	..	
Angle used	1'.6	3'.3	5'.2	7'.3	9'.6	12'.1	14'.8								

SPORTING TELESCOPES

By MESSRS. ROSS, LIMITED

AFTER the rifle itself, a really good telescope is the most necessary requisite for stalking big game. It is most important, however, that the telescope should be of the finest description, having a high power combined with excellent definition, as with such a glass there is an ease and freedom from fatigue in prolonged observations which would be unattainable if an inferior instrument were used. When the eye is fatigued by the use of an inferior telescope it cannot be relied on at the moment it is required in sighting.

Telescopes can now be made especially adapted for sporting purposes, as they give a sharp and clear image, and allow a long spy without fatigue. The most suitable power for a telescope is about 20 diameters, which means that an object at say 1000 yards would appear as if at only 50 yards from the observer. There would be no advantage in using a telescope with a higher power, as it would be less easy to keep steady, and it must be remembered that *motion* is magnified as well as the object under observation.

Telescopes, apart altogether from their optical properties, vary considerably in weight. Some old sportsmen prefer glasses mounted in brass, maintaining that the weight keeps them steady in a high wind,



THE OLD BULL.

70 1940 ALPHABET

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which has, of course, at times to be faced, but those who have used the lighter telescopes never return to the heavier.

This question of weight is a great consideration in a hard day's work, and for this reason telescopes made of aluminium or other light metal are selected. On account of the unstability and the higher cost of aluminium, special thin tubes have been introduced for the mounts of telescopes, which being hard drawn and very carefully put together, combine the desirable items of lightness and strength, and are found to stand wear and tear equally with the heavier tubes. These mountings are bronzed black, as otherwise they would be likely to attract attention by their "glint," and thus startle timid animals.

Besides the indispensable telescope above referred to, there is another kind of glass which personally we have found extremely useful, and which is a valuable addition to the outfit. This is the "Prism Binocular," of which there are several varieties to be had, but we like the Ross prism binocular, which, in our opinion, is the best, on account of its compactness, and also its excellent focussing arrangement, which is very useful on many occasions. The prism binocular glasses are splendid on all occasions when a large field and moderate power only are needed.

Spying in the so generally adopted recumbent position is often a moist process, and while providing against rheumatism by suitable clothing, it must not be forgotten that telescopes and binoculars

also suffer from damp. After exposure in mist or a shower of rain, wipe the glasses as well as you can before closing them up, and on returning home unscrew the eye-piece and the object glass, wipe them quite dry, and leave the body of the instrument extended to its full length in some warm place. This allows the evaporation of moisture and the drying of the draw-packings. These packings are made of specially prepared cloth to resist damp as much as possible, but if allowed to *soak* the packings will swell and cause the draws to jamb or work unevenly.

The pancratic draw tube that was frequently attached to telescopes for varying the power had its advantages, but may now be entirely discarded, as with one of the new prism binoculars and a good telescope of large aperture, all game can be located and examined. Too much stress cannot be laid on having a perfect equipment both as regards rifles and spy-glasses ; success in stalking depends upon it.



PART II
EUROPEAN BIG GAME

Univ of
California

TO VIKU
AMBOGILIAO



ON THE HOMEWARD ROAD.



CHAPTER II

SCOTTISH RED DEER AND DEER-STALKING

By Sir ALLAN MACKENZIE, Bart., of Glenmuick

READERS of this volume will doubtless remember the lines of Burns when the rude "sodger" lad would fain turn "antiquary" and follow the gentler muse rather than the stern god of war. Something of the same feeling animates me when I exchange the rifle for this still more fatal pen. It is with much reluctance that I attempt to put these remarks on paper, and can only throw myself on the generosity of readers, and ask them as fellow-sportsmen to pardon the many shortcomings of one who is more used to spend long days on the hill than burning the midnight oil at the desk.

In offering the following suggestions on the important subject of the "Management of Forests" I should like it clearly to be understood that I do not assume a position of authority. Indeed, in a general treatment of the subject such a position is impossible. What may be true of one place does not necessarily apply to another, and where the natural conditions vary to such an extent man's arrangements must be altered to suit them. Further, apart from the differences in locality, every owner must consider the specific peculiarities of the stock of deer which he keeps, and by studying these try to discover the conditions under which the general good of his own deer is best promoted. Again, with regard to that all important point, the wintering of deer, there are so many different circumstances, each demanding due consideration, relatively to the local conditions, that it is impossible from the study chair to lay down binding rules.

In what I shall have to say I shall, therefore, confine myself to those more or less universal principles which are applicable to the general run of forests, and leave the individual owners to find out particular conclusions for themselves.

A general review of the sport of late years would, I am afraid, be somewhat disappointing in its result. With the exception of some notable forests where the owners have imported fresh blood, and in other respects displayed excellent general management, the average quality of the deer would seem to have declined. Not only during the winter and spring,

but also in the stalking season, I fear that neither the heads nor the weight of the deer have been as good as they were some twenty years ago. But judging from the conversations I have enjoyed with many stalkers during the past few seasons, though there is a general unanimity about the deterioration of the deer, there is a great diversity of opinion as to the most probable causes.

Naturally the sportsman seeks to kill the best stags during the season, and with the great improvement in sporting rifles the "modern" stag succeeds far less frequently in eluding the leaden ball. When we remember, further, that in many forests it is the best hinds which are killed during the winter we cannot be altogether surprised if the average quality does tend to decline. Then, again, the nature of the seasons has a very considerable effect on the herd. That the spring is the most important time for the deer I am certain, and if the high ground be early free from snow the deer are able to make for those mossy patches which experts think have most to do with the improvement both of their heads and bodies. At the same time these general considerations do not seem sufficient to explain all the facts.

If we look more carefully for reasons we find some stalkers asserting that overstocking is the main cause of the decline ; and that this is a great source of danger no one will deny, and it must therefore be carefully guarded against.

Others, again, attribute the deterioration to the

fact that the pasture in the deer forests is not now nearly so nourishing as it was when the ground was first cleared of sheep. There is no doubt whatever that sheep do improve the grass on the hill, whilst deer as certainly do not. Every one who takes an interest in deer must have noticed both how a herd will at once go to sheep ground which has been left quiet, and how they seem to enjoy and thrive on the sweeter grass.

In this connection I made an experiment some time ago. For two or three years I allowed some hundreds of sheep to feed on the low part of the forest for five or six weeks in spring. There is no doubt they did good to the grass, and though they ate much of the young crop that the deer would have had otherwise, I consider that on the whole the experiment was a success. In many forests there is a great deal of pasture land much of which is at present useless, but which might, at a very inconsiderable cost, be immensely improved by surface draining; and this I should most strongly advocate as calculated to do good to the stock in general.

Thus, though this general deterioration, which the great majority of sportsmen seem to think has occurred, may largely be explained by secondary causes, it is none the less to be very deeply regretted. Time, trouble, and more care about the way in which money is used in the attempt to improve deer will do much to lessen the evil. But I have often wondered whether some *general* agreement among owners of



"VERRA SUSPEECIOUS."

THE UNIVERSITY OF CHICAGO



A ROYAL.

forests could be arrived at which might vastly help individual efforts.

If a general assent could be procured, to the effect that for two or three years only second-rate and back-going stags, together with the weakly hinds which are generally to be found on the low grounds, should be killed, it is clear that all forests would be vastly benefited ; nor does such a plan seem to me impracticable. Where there are so many forests and so many interests involved it would undoubtedly be difficult to arrange, but I venture to think that both the owners of the forests and the general run of tenants would be quite willing to fall into some such general agreement. Were some personal sacrifice entailed or some ambition thwarted for a year or two, there would be the satisfaction of doing something for the broad improvement of our forests—a sacrifice which every true sportsman ought to be willing to make for the sake of an object which lies deep in the heart of every true lover of the red deer.

When we turn to the question of “breeding” we enter upon a course as difficult and tortuous as that of a day’s stalking—and can one say more ? Here, if anywhere, the old Latin saying, “*Quot homines, tot sententiae*,” is, and will probably ever remain, true. My own opinion will be, perhaps, most clearly shown by relating a practical experiment of my own making.

A few years ago a friend sent me a stag, a cross between a Wapiti and one of our own red deer

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hinds. He had been a good deal knocked about and frightened before he arrived, and it may be that he had caught cold in his head on the journey—a malady to which a stag is very liable if he travels in summer before his horns have finished growing. In any case, during that year his head came to nothing at all. In 1902, however, as a three-year-old, he had a very fine head of 14 points, and in 1903 had an equally good one of 15 points. This year he has 17 points. Beautiful as his head is, I never liked his sloping hind quarters which he inherited from his Wapiti ancestry, nor does he show the same quality or look as fine or as thoroughbred as our own deer. However, I put two or three hinds into the park with him. At the same time I had in another park a number of hind calves taken from selected hinds off my highest ground, together with seven a friend had sent me. Many of these calves were distinctly superior to the calves from the cross Wapiti; and though some of my friends, who know and understand deer, think that I am wrong, I have determined not to try further breeding from the cross Wapiti. There is no question as to the wonderful head and size of the Wapiti, but that is not everything. By keeping to our own pure red deer I am of opinion that the same size and weight can be procured, whilst at the same time all the grace and quality of our own monarchs of the hills can be preserved. Since I was fortunate enough to get three stags from Warnham Court, my decision to breed from British stags has been strengthened—one

of them this season, at three years old, has a head of 10 points, a two-year-old a head of 12 points. These stags I put into the park with the calves from the selected hinds already referred to, and *their* calves I turn out in the forest every year as soon as the grass comes, always keeping the Warnham stags and hinds in the park. Let me add, in passing, that when I visited Warnham to see the deer I was told that it was thought that a proportion of five hinds to a stag was quite sufficient, rather different to the general idea in our forests.

Reference to Warnham Court suggests the second point which has to be considered when dealing with the general management of forests—I mean that of the *feeding of the deer*.

What pleased me as much as anything at Warnham was to find that the deer are there kept in a natural state, and the rule is that there should be no artificial feeding unless snow has been lying for three days. I may at once confess that personally I do not advocate the feeding of deer. Where they can get into the woods there is no need of giving them artificial food, and of course there are some on the high grounds which never can be fed. These deer will not come down ; it is impossible for men to take food up, and matters must therefore necessarily be left alone. One often wonders, indeed, how these deer, usually hinds and young stags, eke out their livelihood. Very possibly the high ground helps them, for even when there is heavy snow these ridges are often blown bare and the heather left exposed.

What I, therefore, try to do is to save good heather on those ridges which are most exposed to wind in order to provide some good natural feeding.

When we come to consider the cases where hand-feeding is possible, my advice would be very much the same as Mr. Punch's on marriage—"Don't." Of course there are winters and winters, and there are undoubtedly winters when it is absolutely necessary to provide artificial food. No one could bear to think that during such times the poor animals were starving, to say nothing of the loss to the forests which would be entailed for some seasons to come. There are times, too, in winters of quite ordinary severity when feeding becomes a necessity. Suppose there has been a snowstorm, which has been followed first by a partial thaw and then by a sharp frost; the result is that a crust equal in hardness to that of ice is formed over the whole ground. The attempts of the deer at such times to find food may often be traced by the blood from wounds received in their efforts to scrape through this hardened surface. It is unnecessary to say that at such times artificial food must be provided. Last winter it was absolutely necessary to feed deer; in one place I fed some 700 good stags, which allowed one to walk amongst them without taking the slightest notice.

As a rule, however, I am opposed to hand-feeding. It is with deer as it is with charity. Ill-considered giving is not a benefit in either case. To begin with, you tend materially to decrease the "independence" upon which we Scots pride ourselves as a race, and

Life of California



THE SHOT.

TO THE
ANTHROPOLOGICAL



AN INVERNESS-SHIRE ROYAL

which we like to see even in our deer. So accustomed will the recipients get to being fed that they soon cease to take the trouble of finding food for themselves, and may even be seen lying—"lounging"—around the door of their, may I say, "protector," waiting for their free breakfasts.

Again, it is almost impossible to lay out food sufficient for a large number of deer. Many of them are benefited, but the older and stronger stags are apt to take possession, drive off the younger and weaker, and thus deprive the very animals which are most in need of artificial help.

For these and other reasons, I am inclined to think that the more the deer are left to themselves the better, and that, except at exceptional times, fir and spruce woods generally provide sufficient nourishment and shelter.

If, however, the owner is determined to go in for hand-feeding, I should strongly advocate putting it off as long as possible, for when once begun it must be continued until the new grass comes on the hill. I am, of course, though not approving of the general principle, quite prepared to admit that feeding does tend to improve the stock; and the following illustration sufficiently shows this. A few years ago I had a stag calf and two hind calves caught and put in a small park and fed on hay, turnips, and cake. At two years old the stag had a head of 10 points (at the same age a stag on the hill has seldom more than 2 points), whilst the hinds had both calves. The stag on getting very savage was killed, and at

$$\begin{array}{r} 19 \\ 14 \text{ lbs (1 stone)} \\ \hline 76 \\ 19 \\ \hline 95 \end{array}$$

three years three months weighed 19 stone 6 lbs. One of the hinds escaped, and when shot by my eldest boy during a drive she weighed 14 stone.

If hand-feeding is to be done on a general scale, I should recommend the use of locust beans and the best clover hay in preference to turnips and hay. For these beans are much more easily carried and much more economical than turnips, and also are enjoyed far more by the deer. If the hay is not of the very best they will refuse to eat it unless compelled to by starvation. In case of a heavy snow-storm I would have a supply sent to certain places and stored. Locust beans can be spread broadcast on the surface of the snow, and the deer will readily pick them up. In trying to follow out during the past few years what I have suggested, it may be of some interest to know that this season in the forest here 147 stags were killed, average weight of the whole 130 tons 9 lbs. clean. This I hope to improve upon; in former years 70 stags were considered a good season's sport.

There can, I think, be little doubt that the "ideal" forest, and it is not a Utopian ideal, is one which is surrounded by sheep ground, the whole ground belonging to the same proprietor. This solves most of the problems in connection with the feeding of the deer, and allows good opportunities for experiments in breeding.

Before, however, leaving the question of the management of forests there are two remarks which I should like to add.

The first of these is with regard to grouse shootings in connection with deer forests. If I let a grouse moor I should not allow stags to be killed on it. I am afraid too often, on shootings advertised for grouse, stags have been killed, and in many cases I know this has been done towards the end of October and even in the beginning of November. I do not want it to be thought that I altogether blame the tenant. Very often he is led away by the keenness of the keeper, who dearly loves to have a stag killed upon his ground even when the venison is of no use ; but I think it should be an understood thing that no stag should be killed on grouse ground after the middle of October at latest, for there is little doubt that much harm is done to the forests through good stags being shot in this manner, and when stalking in the forests is over for the season. The deer at this time of the year often go on to the grouse ground when the sheep have been removed to their winter quarters.

My other remark is that there is a serious want of agreement about the weighing of stags. At present, whilst perhaps in the majority of forests stags are weighed clean, in others the heart and liver are allowed for, which adds another stone to the total weight. As this is not always understood, it is difficult for sportsmen to see why stags should weigh more in one forest than in another which perhaps marches with it. Whilst I am personally in favour of the former method, there is a good deal to be said for the contention that as the heart and liver are

edible parts they ought to be included in the total weight. Would it not be possible that a small committee of well-known men, owners and tenants of deer forests, should be appointed to settle this question definitely? There might be a feeling against suddenly reducing the weight of stags by a stone, and therefore the decision might well be that the heart and liver should be weighed. But whatever the decision, I am certain that the adoption of a uniform standard in the future would give satisfaction to all concerned. Personally I have lately, instead of allowing the 7 lbs. for stags which unfortunately have had to be left on the hill all night, given instructions that the weight returned be what they scale, with a note on the ticket, "Left out all night."

When I turn from the questions of management to the sport itself, I feel that it is difficult to know precisely where to begin and where to end. In making some remarks on deer-drives and stalking, I must perforce restrict myself to the results of my own experiences.

It has been my privilege to take part in many drives, and though they never have had the same fascination for me as stalking, still they possess their own special features, which cannot fail to attract the sportsman. To begin with, there is the long, patient, skilful work of the drivers in collecting the deer from great distances; then follows that part of the work which calls forth all the skill and nerve which experience alone can give. To watch the few men



READY TO START.

THE WILD
ANTHROPOLOGICAL



THE 11-Pointer heads the list.

quietly moving a large herd of some thousand deer up towards the rifles is one of the most wonderful sights of the hill. Nor is the day then won ; and though at this point our arm-chair critics content themselves with scoffing at the "sporting" element, it is just here that almost incalculable causes produce infinitely great results. One wrong step, one false plan, one purely accidental circumstance, and the patient work of hours may suddenly be brought to nothing. Once let the deer break back, and no power on earth can stop them ; they are already a mile away, and the "gun," after his long and watchful wait, is left to fill his pipe and philosophise.

I can recall one somewhat peculiar case in which I myself participated. Many hundreds of deer had been collected, and had been successfully brought to the very foot of the pass up which it was intended they should go. Here, however, the deer hesitated, and the leading hinds turned towards another pass where I had been stationed. I risked a shot. Fortunately the bullet fell into a small pool of water lying just in front of the leading deer. In a moment they had again wheeled and made straight up the original pass, where the rifle did not fail to do his work.

Another phase akin to that of driving, but by no means identical with it, is the "moving" of deer when out stalking. In this case you are probably only able to send the ghillie who is with you, and though this is sometimes successful it more often fails, and should therefore only be resorted to *in*

extremis. When, however, there are too many deer between yourself and the stag you want to shoot, or when the ground does not give sufficient cover, something of this sort has to be tried.

One curious incident of this kind happened to me whilst shooting in a well-known forest some four years ago. On reaching my ground on the Monday morning, I was met by the stalker, who told me that as the storm, which had raged all Sunday, had continued during the night, he expected all the deer would be in the shelter. Walking up the burn I soon proved his supposition to be perfectly correct. The whole face of the hill was alive with deer, and stalking in the circumstances was out of the question. We held a parliament of war at the top of the burn, and agreed that our one chance was to try to "move" the deer. The ghillies were accordingly left behind. Having given the stalker and myself two hours to get round they were to attempt the "moving." All at first went well. The deer were started, and were coming straight and steadily on towards the place where we had our stations. The excitement increased as they came to within 400 yards of us. Suddenly they stopped, turned, and broke down the hill, going like the wind.

It was an occasion on which the curious-sounding Gaelic was very soul-filling. However, there was nothing for it but disconsolately to pick ourselves and my rifle up; and, lighting a pipe to soothe our shattered feelings, we started off in the direction from which the herd had come. My stalker was very

keen that I should try a stalk at some deer we had left near his house in the morning. We had not gone many yards when I exclaimed, "What are these in front? Surely they are goats." "Never a goat in —," was the response of my companion, who was more disgusted and annoyed than even I was. It was snowing at the time, but using our glasses, we saw that they were indeed goats, three in number. They had been lying in a hole, and the deer coming suddenly upon them, unaccustomed to them and to their strong odour, had suddenly taken fright, and our piece of bad luck had followed as the consequence. For three days afterwards men were sent over the hills seeking for the blood of that little band of three, but strange to say never a goat was seen again!

But it is stalking pure and simple which appeals to me most. There, from the sighting of the stag to the moment of taking aim, the whole is one long drawn-out excitement. The walk by the side or in the bed of the burn, the continued noting of the variations of the light and of the wind, the quick decisions which have to be made, the crawling through heather and marsh, the lying flat on the face behind some stone, and the suppressed excitement of the last ten yards,—who, having ever experienced these things, can ever forget them? Where is the man who does not, time and again, travel every foot of the hills over which he went on the way to his first kill? Though, personally, I have never yet gone up to a dead stag without a feeling of sorrow for the noble animal,

which, a few minutes before, was the emblem of beauty and strength, I am afraid that feeling dies away at the sight of fresh deer. There is something in it all which calls out the best sporting instincts, the powers of endurance, the exercise of skill, and the employment of that "lore" which has only been gained by a long-continued, patient study of Nature herself.

Like many other men, I have often been asked my opinion about ladies going out stalking. Personally I have enjoyed the company of many ladies on the hill, and have been struck by their tireless energy, their keenness, and the quick way in which they learned the rules of the sport. Nor have I ever known a stalk lost or spoilt by the presence of a lady. So long as you know her well, can trust her to do at once what you ask, and have a ghillie whom you can thoroughly depend on to send back with her should the stalk prove too long or too difficult, I can see no objection to the presence of the fair sex.

In conclusion, let me say one word to the young stalkers, especially to those who own, or whose fathers own, deer-forests. There have been so many able articles written on the proper dress, the best food and drink, etc., that I do not intend to touch on any of these points. Once on the hill, however, take my advice, and the advice of all mountaineers, and however strong the temptation be, pass by the first spring on the way, and you will find that the others have little temptation for you.



A STAG "ROARING."

TO THE ABORIGINAL



CROSSING THE BURN.

Then learn as quickly as possible to do your own stalking. Walk in front of your foresters, not behind them ; find your own deer, make up your mind how you think it best to approach them, and then hold a consultation with your stalker. You will find that he is always most ready to help you, and will tell you whether your plan is right or wrong. Having come, guided by his advice, to your final decision, go on and do your best, not minding whether you make a mistake or even lose your stalk. In stalking, as in other things, experience is the only mistress, and even though her lessons occasionally be somewhat bitter, yet "not failure, but low aim is crime." You will be prouder, and justly prouder, of the one stag you stalked by yourself than of the twenty to which the stalker leads you.

To those who are only guests I should suggest, especially if they are troubled by that terrible thing "stag fever," that they should go the last 200 yards or so alone. Get the stalker to point out the stag you want to kill, have a good look at him, and fix the spot from which you are to shoot, and then crawl to it as noiselessly as you can. Left in this way to your own resources your heart does not seem to be so much in your mouth when you near the stag, nor does your hand shake as it raises the rifle. Many a stag has been lost which was a perfect shot for the stalker, but which was a difficult one for the rifle by his side. Try, therefore, to get the better of yourself, and the chances are that by doing so you will best achieve your object.

In bringing these remarks to a close, I will urge once more that all trouble possible be taken ungrudgingly in order that nothing be left undone which will tend to improve and maintain our deer. In Scotland very much of the material prosperity of the Highlands is dependent upon the state of the deer forests, and any efforts made to improve them are far from being thrown away. At the same time, it is a higher motive which will influence the true sportsman to do his best. Beyond all question of financial returns, every lover of stalking will be willing to do what he can in this way out of the simple love he feels for the animals themselves. Standing in his pride of antler, his head well thrown back, his delicate nostrils sniffing the air, there is something majestic in the bearing of the red deer stag. His domains are the heather-covered hill and the grassy forest ; his stronghold lies beyond in the dark glen walled in by towering crags. The gurgling streams splash down their silvery water to quench his thirst, or lie shimmering in rocky pools to cool his panting sides. Everything around is his, and he looks upon it all with the calm tranquillity of possession, stepping in lordly mastership over what was surely made for him, and him alone. Dispute his rights with him, chase him from his solitary haunts with sound of rifle or bay of hound, he will move away the picture of natural grace, the very poetry of motion. A gleam of ruddy gold hoofs, scarcely touching the heather, and there again he stands looking back to see who dare approach so near.

Take him by surprise, and use the almost mean advantage of the invisible bullet, and he will die with a pitying gaze upon you, a proud monarch to the end. For the lord of our forests, for the monarch of our hills, beautiful in life, noble in death, let all that can be done be done, and let it be done willingly.





CHAPTER III

SOME FURTHER REMARKS ON DEER-STALKING

By the EDITOR

I AM painfully aware of my temerity and presumption in attempting to supplement with my own words anything that Sir Allan Mackenzie has written on the subject of deer-stalking. It may be that this knowledge only makes the offence more rank. Nevertheless, it has seemed to me that it may be possible to say something that might escape Sir Allan's notice, simply because he is so very familiar with the subject that his view is not that of the great majority. Many things may seem quite obvious—too obvious to be worth mention to him—that are not by any means so obvious to other people. He has been brought up on a deer-forest, in very inti-



SWIMMING ACROSS THE LOCH.

TO THE ANTARCTIC



A DIFFICULT STALK.

mate knowledge of the animal. All of us have not been so blessed. To most of us who are Southerners, at all events, our first introduction to the stag and his stalking comes after we have arrived at years of what we are pleased to call discretion. We are introduced to him as to a new friend.

Sir Allan Mackenzie, I observe, does not say anything to guide the tiro in the selection of a rifle. Mr. Fremantle says something about it in another part of the book, and no one can say anything that he does not know about rifles. But he speaks rather generally, not with very particular application to the deer-stalking business. The general choice in these days is between the .303 and the .400 Express and the Mauser and Mannlicher. It is true there are other good rifles with which good shots kill good stags. They are too many to name. On the best-managed deer-forest in Scotland, or on one of the two or three very best managed, the .400 is the favourite rifle, but very often it is objected to on the ground that it makes so much noise. It has the merit, however, of making a comparatively big hole in the deer, so that if you hit him anywhere in the body you are fairly sure of getting him. Whether the impact of the smaller but more swiftly travelling Mannlicher is not even more nerve-shattering and more than equal in its stopping power on a stag or other wild beast is a good deal debated, but it is quite sure that, where any question of tracking comes in, the bigger bullet has the advantage of making the bigger blood-trail. The great merit of the Mauser

and Mannlicher, however, is their lower trajectory, and, after all, the blood-trail is a comparatively unimportant consideration with the red deer out on the open forest ; it applies more to the tracking of an animal wounded in a wood or jungle. But the lower trajectory is always of value, leaving less to the judgment of the shooter, and bringing all ranges nearer the point-blank ideal of simplicity. The ability of the Mauser and Mannlicher to shoot five shots in quick succession is often very valuable on a forest, where you may want to pour bullet after bullet into a stag going off wounded. Where the game is a dangerous beast, and apt to charge, the faculty of firing two barrels in instant succession is obviously worth more than that of firing five shots fairly quickly. In case of deer-stalking, however, this is not the case at all. The tiro with the magazine rifle should practise until he acquires the instinctive habit of doing the drawback and push-forward movement required to change the cartridge the instant he has pulled the trigger, so that the noise of this operation may be covered by the report of the discharge. The discharge makes a noise that startles the deer, indeed, but often does not give them any such fright as to send them immediately away. They are in doubt as to the exact direction whence the noise comes, and it happens now and then that as they stand and gaze, trying to find out exactly where the danger lies, a second standing shot can be taken. This could never be done if the already startled deer were to receive the definite warning

given by such a noise as the shifting of the cartridge. They would be off like a dart, and afford only the worst chance of a moving-away shot. In this respect, then, and in their superior lightness and quickness, the Mauser and Mannlicher have all the advantage over the .303 Express, and still more so over the .400. Lightness perhaps does not matter much to the amateur stalker, for, as a rule, it will be only for a few hundred yards at most out of the day's march that he will carry the rifle himself, and a heavier rifle is more easily held steady for the aim. But there is one point that the amateur stalker feels, but the professional does not, and that is the cost of the rifle. In this regard the Mauser and Mannlicher have a further advantage. Probably a twelve-guinea Mannlicher, or a Mauser of about the same price, is of the same degree of excellence as regards accuracy of shooting as a sixty-guinea Express. It does not need the financial ability required for the understanding of the fiscal policy to see how much the Mannlicher is to be good on cost. There are reasons, above stated, for thinking it the better deer-stalking rifle, apart from the question of the cost. And yet, if a man has grown used to shooting with an Express, and prefers it, he would surely be very ill-advised to change ; and for a quick shot, alignment along a double barrel is taken more easily than along a single. Into the hands of a tiro, however, especially if you have to buy the rifle for him (this is said for the benefit of the purse of the father of our friend the tiro), the Mauser or the Mann-

licher is very certainly the weapon that should be placed.

As for the sights to be placed on it, these are well discussed by Mr. Fremantle. The young keen eyes ought to do well enough with the open sights. The peep-sights help the eyes of middle age, and for a long, standing shot—that is when the deer is standing—the telescope sight is a wonderful help. But it is of no use for quick work, and Mr. Fremantle is very right in insisting that it should be arranged alongside the barrel for sporting purposes, not over the barrel. If in the latter position, it prevents the use of the ordinary sights for a quick or a running shot.

The stalker, I mean the amateur, for whose possible benefit I am presuming to make these observations, is not at all likely to have the chance of stalking a stag for himself from the commencement of the operations with the spying of a “shootable beast” down to the final shot. The men who have the chance of doing this have generally been born and bred on their fathers’ forests, and I should very gratefully take hints from them and should not dream of giving them. The utmost that the man for whom I write will do for himself is the last two hundred yards or so of the business, when the professional stalker has pointed him out the beast, and probably indicated the exact spot beyond which it will not be safe to try to approach. Even for this limited freedom of action I think the guest should ask leave of his host before starting. Some hosts



THROUGH THE BIRCH WOODS.

TO VINU ABORIGINES



HAULING INTO THE LARDER.

would prefer every guest whose capacity for the business they do not know, to be shepherded by the professional up to the very final act. But without taking on yourself any of the bigger part of the stalk, you are quite justified in asking the real stalker to explain to you his plan of campaign, and you will enjoy the whole thing very much more if you take your own humble share in it with understanding. The right kind of professional stalker will also much prefer that you should take this intelligent interest.

The first business is, of course, to find the deer—to spy them. When you are away down in a glen, and sweep with your glass the two sides of it, it may seem to you at first as if you could in this way spy out every deer that could possibly be lying on it. But this is a mistaken notion that only the merest tiro will hold. As soon as you begin to ascend one of the sides of a glen or corrie, you begin to see details of the opposite side beginning to unfold themselves, of which you did not suspect the very existence before. From away down the corrie, any fold in the ground was quite imperceptible; its two rising sides seemed to be united, and it is only as you come opposite to these depressions and folds that you are able to realise how capacious they are, and can spy right into them to see what they may hold. Correct, or tolerably correct, judgment of a stag's size when he is still far off, and when perhaps you see him only partially, comes by experience alone. In no department of the whole

business does the tiro more imperatively need a wise mentor than in the selection of the "shootable" stag. When you have found him, and when you begin to make the first moves for his circumventing, the tiro is very likely to be surprised by the non-chalance with which the professional stalker leads him, as it seems, in full view of the distant herd of deer. But it is to be remembered that the deer have not got spyglasses. They have their eyesight, and it appears that that eyesight is just about as keen, not much more nor less keen, as that of a long-sighted man. That is true of their vision in a clear light, but when the dusk is falling then their sight seems to be far keener than that of a man in the same circumstances.

To this extent, then, can the stalker presume that the deer will not see him. And besides the sight of the deer there are two other acute senses in their possession with which the stalker has to reckon—their hearing and their sense of smell. It is an offensive thing to have to say, but it is quite certain that, with the wind fairly in their favour, deer can smell man at the distance of more than a mile. Various authorities would vary in the estimate, but a little over a mile seems to be about the limit. I believe that several fantastic schemes have been tried to mitigate the scent by which man gives warning to the deer of his approach, such as dressing up in a costume of deerskin, and so on, but the truth appears to be, according to the consensus of experienced opinion, that it is the breath of man that

the deer smell, and since a man has to breathe, and often to breathe pretty hard, in course of a stalk, it is not easy to imagine any means by which his alarming odour can be neutralised. The third sense of the deer with which the stalker has any concern, that of hearing, appears to be keen, but not abnormally developed. It is not often, comparatively speaking, that a stalk fails because the deer have heard the noise of the approach of man. Very many times more often it is because they have seen him, or because they have got his wind.

The business of stalking would be relatively a very easy one if it was conducted on a fairly flat country over which the wind blew steadily without deflections. But that is very far from the case in the Highland hills and glens which are the home of the red deer in Scotland. The wind blows in very various and diverse eddies down and along the corries. Sometimes when the clouds in the sky overhead are coursing along from east to west, a handful of dry grass blades thrown up into the air as one crawls along the bed of a corrie will be carried by the local current from west to east. The local currents are those that carry the news to the sensitive nostrils of the deer, therefore it is the local current that it behoves the stalker principally to think of, and to lay his plans accordingly. The knowledge of the direction in which the local currents will be blowing when the wind is in a certain quarter is one of the most essential for successful stalking, and one that can only be acquired fully by the lessons of

local experience. Even the local man is often puzzled, sending up his kites, in shape of little tufts of moss or heather or cotton grass thrown aloft, to discover the current's direction. A man of much general experience will make a shrewder guess at the set of the currents, given the data of a certain general set of the wind, and certain conformation of ground, than one who is inexperienced, but intimate local knowledge added to power of observation and memory is the only safe guide. Even granted all these gifts, the best-laid schemes will sometimes "gang agley" and the wind of the man be wafted to the nose of the scared deer.

Apart, for the moment, from consideration of the small local eddies, the general idea of the stalk is, of course, to get to leeward of the deer, to approach them with the wind blowing from them to you, not from you to them. To effect this object you may have to make a very long detour, to climb precipices, to crawl up the beds of burns, to do a thousand and one uncomfortable, humiliating, and exhausting things ; for while you have to keep out of smell of the deer you also have to keep out of sight of them, and by a peculiar perversity it always seems as if the leeward side was just the side on which there was no cover, no big boulders or other means of concealment to hide you from the deer. One of the first principles that you have to recognise with regard to the eyesight of the deer is that they are much more liable to see you below them than above them ; it is more natural and easy for them to look down than to



A TAIN IN THE WIND.

TO VIVID
APPROXIMATIONS



WILL HE NEVER GET UP?

look up. Therefore it follows that as a rule the right thing to do is to plan your approach so that you may come on them from above, of course assuming that this is compatible with approaching them from the leeward side. It is a plan that does not make for any greater ease of walking ; but this is an ignoble consideration that is never allowed to enter into the plan of campaign with any modifying force.

A point that you have to bear in mind is that the particular stag you have selected for your stalk is by no means the only specimen of the red-deer kind in the forest or in that particular corrie. If he were, your task would be simplified hugely. Now and then you get a stag away by himself ; and then he is a very easy animal to stalk, comparatively speaking. But as a rule that has few exceptions you will find him one of a herd, guarded by as many pairs of eyes, nostrils, and ears as there are deer in the herd. Moreover, as you move about the mountain-side you may expect to come upon other herds or other companies of deer ; and if you give the alarm, either by sight or smell, to any of these, and they make off in their alarm in such a direction that any one of the herd that is your special objective happens to catch a sight of them, then this other herd that you have marked for your attentions will be on the alert, and on the move too, and you will do no good with them for that day in all probability. On every occasion, therefore, that you open up new ground in making your detour you must spy it all out very carefully.

This practically means that to have a thorough good look at one side of a corrie you must get opposite to it ; and it also means that you must make a very careful survey of all that lies before you whenever you come over the ridge that discovers ground which you have not yet spied. On many forests, it might almost be said on most forests, it is necessary to keep your eyes open not only for deer other than the herd for which you are making, but also for any wandering sheep. There are few moors where you will not occasionally see one or two black-faced fellows of the sheep kind, and in some forests they seem to be ubiquitous. It may seem singular to any reader who has not tried deer-stalking, and does not know the Highland sheep, that they can be any trouble in the stalking of the stag. The sheep of south-country pastures is properly described as a domestic animal. The Highland sheep is rather complimented if the title of semi-domesticated is bestowed on it. It is not quite as wild as a deer, but it is not a great deal less wild. I have asked stalkers whether sheep will take the wind of a man and run from it like a deer, and they all say "yes," that a sheep will do this when it gets out on the forest, although it will take no notice of the scent of a man when it is on the farm. It appears that when sheep get a little wild, in consequence of being out of touch with man, on the hill-side, they go back to something like their original state. They will run for the best part of a mile if they are startled by the appearance of a man on the hill, and this is quite far enough for them to

give the alarm to a good many deer. Moreover, they have a way of getting up on the highest available peaks, to have a good look round, in which position they are peculiarly conspicuous to any deer, and the deer perfectly understand from the attitude of the sheep that something of an alarming nature is attracting their notice. From all this it is obvious that you often have to stalk the sheep, or to stalk away out of their notice, as carefully as out of the way of the deer themselves ; and there are not many who have done much stalking that have not gone round many a weary mile of hard climbing to avoid frightening the sheep, and so passing on the alarm to the deer. A rising grouse will startle deer as effectually as a sheep. Of ptarmigan the deer take little notice.

So now it may be supposed that with all cautions observed, and care never to show yourself on a skyline, if it may be avoided, in case of unseen hinds spying you from afar off, you have arrived above the herd that is your objective, and have the wind blowing fairly from the deer to you, so that there is no chance of their scenting you. The real business has still to begin. A word of caution may be given as to the manner in which you may have come thus far. The tiro, if he be in the state of athletic youth, often will be fired with a noble ambition to walk down the stalker and the ghillies. It is a fine ambition, but how often is it realised ? One may say never. A few 'varsity athletes have had the honour of being reputed to make the native hillmen step out, but that is about as much as the best of them have

done. Ninety men out of a hundred that come from the Lowlands the ghillies can leave as if they were standing still. And if you should succeed, as is unlikely, in making them walk, it will be at the expense of great fatigue to yourself, which will not help your aim when the moment comes for the shot, and will make you start on the morrow like a tired cab-horse. Take your time, is the best maxim for walking on the hill—take your own time, and never take your time from the stalker to his trade. Remember that when you set out on a day's stalking anything within 40 miles may be required of you, and some of those miles may be of hard climbing. So ride a pony when you can, and walk at your ease when you cannot ride. It will pay you better in the long run to do this than to have pedestrian ambitions.

When you have arrived at the ideal position, a little above the deer, and with the wind blowing the right way, you are then very much more than commonly fortunate if you can stalk your way up to your stag and shoot him without any delay. Maybe the only stag in the herd that is of a shootable size, supposing there be more than one, will be lying with many hinds between you and him. If he be lying down it may be that you will have to wait till he gets up before taking your shot. In this respect you will find as you go about to different forests that different professional stalkers to whose care you are entrusted differ greatly in their views as to what constitutes a "good chance." As a rule they hate your firing long shots at any beasts, or any shots at all



PONIES WAITING AT THE GATE.

TO VIEW
AMERICA



RECONNOITRING.

at a lying-down stag ; but they encourage the firing of shots at a moving stag if he gives a fair chance at tolerably short range. The tiro, unless he is very well acquainted with his rifle,—unless indeed he is something rather more than a tiro at the business,—is apt to find the moving shot the most difficult of any. It is to be presumed that he will at least have taken the opportunity of firing his rifle a few times at the target, or at a stone at measured distance, before starting out, so as to have some idea, even on his first day's stalking, how the rifle is going to behave. A point on which the professional stalker's advice should be taken without much reservation, is the distance at which he estimates the stag to be from the shooter. The shooter is nearly sure to exaggerate the distance. The professional is nearly sure to underrate it, according to my own experience, but he is likely to be more correct than the amateur. Take the stalker's advice as to this, and take as much of your foresight as the practice at the target has shown you to be requisite, and remember to favour the low side in your firing. Most misses are over the beast's back.

A matter in which the stalker's opinion may be taken with a little more reservation is the advisability of firing at the stag while he is lying down. As a rule the stalkers are apt to treat it as an axiom that you must wait till the stag rises to his feet. Now a stag seldom lies flat. He lies resting, leaning, on one side or the other, and if he is lying on a hill-side facing you, leaning away from you and broadside on,

he is presenting to you nearly as large a vulnerable target as you will have when he rises, and you have the further advantage that you can be tolerably sure of his immobility. When he is standing, you have none of this confidence. He may start at any instant, moving a step just at the moment that you are about to press the trigger, and even if he does not so move the knowledge that he is apt to do so cannot fail to have a disturbing influence. You are likely to do better with him there where he lies than after he has risen. This is the plan that has the further advantage of saving you no one can say what length of waiting his royal pleasure to move, and the waiting on a cold day is not in itself conducive to accuracy when the great moment arrives. If, therefore, the lying stag offers you an opportunity of this kind, it may be worth while to try the effect of your persuasive influence on your mentor to induce him to give his sanction to such a shot. The tiro is never to be advised to act directly in opposition to the stalker's advice, for the consciousness of this lack of authoritative support for the act is again apt to disturb the aim, and the mentor will have cruel revenges of the "I told you so" kind if the tiro's daring is not rewarded by success. On the other hand, if the stag is lying on the other side, relatively to the shooter, he presents a very poor mark, and it is far the better part of valour to wait for his rising.

The waiting may be nearly interminable : no one can say how long. Generally, however, the deer

will get up and begin to feed towards evening. In this respect they are kinder than sheep. If sheep are in your way it is useless waiting for them to move, unless a very few steps will take them round some point that will conceal you from their view. Deer are more restless. Yet even they will try the patience of the stalker sorely, especially if a cold wind is searching out the hill-side on which they are lying. When there are hinds between you and the stag, and there is no prospect of approaching more closely without alarming one of them, then there is nothing to be done but wait till they shall get up and begin feeding. If, indeed, your stag should be within shot from where you are crouched, the expedient of whistling him up or tapping him up may be tried. A whistle or a tap will put all the herd on their feet quickly enough, and there is the chance that your stag may give you a fair broadside shot as he stands, with all the rest, in wonder a moment whence the sound came. But it is risky business. He may move off without giving you the broadside shot at all. The vulnerable part may be protected by a hind or a small stag between you and him ; and in any case the shot is bound to be a hurried one. You cannot take your time, because the beast you are aiming at is already alarmed, on the point of moving off, and the very knowledge of this is sure to force you to shoot hurriedly, even if the movement you are fearing is not actually made. Unless there are imperative reasons for it, such as a difficult walk down the hill which you do not care to under-

take in the darkness, the "whistling up" had better not be attempted. Patience is golden.

When the deer rise and begin to move, unless you are already within shot of your stag, you will have to follow them as soon as they have gone over the next ridge. And this is a manœuvre that has to be executed with caution, for the red deer, except when they are in the very trusting mood that sometimes comes upon them late in the season, are themselves very cautious beasts. The stags are less suspicious than the hinds, and it always seems as if there was one old hind who told herself off for the special purpose of watching as a rear-guard of the herd. She is seen to linger behind the rest as they go over the ridge, and sometimes even to turn back, after crossing it, as if to see that no one was following them. Then when all, including this last suspicious lady, have passed on out of sight, you may make the best of your creeping and crawling way after them.

It is impossible to follow all the windings of the imaginary stalk. We will suppose that you are come at length to the spot whence, from behind a boulder, you can get your shot when the stag turns his broadside towards you. At this final point it is good to give a caution to the tiro. Do not fire with a rest on the bare stone itself. Lay your cap, or some soft deadening pad, between the rifle and the stone, or the slight jar of the concussion may lift the barrel a trifle—a trifle that is sufficient to lift the bullet over the stag's back. That would be a misfortune too black to contemplate. If you have

merely wounded him, let no consideration of the folly of firing long shots prevent you from giving him another and yet another bullet to bring him to a standstill. The harm is now done ; you cannot increase it by wounding him again, and you may retrieve it by stopping him. Do not fire if there is a chance of wounding another of the herd, should you miss your special mark, but this is the only consideration that should make you hold your fire on a wounded stag. Deer have a way of clustering round a stricken stag, or perhaps it would be more correct to say that the stricken beast has a way of burying himself in the thickest of the herd, so that this danger may present itself. Unless the wounded stag be struck in the stomach, it is unlikely that you will get him, if the bullet has missed a more immediately vital part. The distance, and the pace, that a wounded stag will travel are astonishing, and even with a broken leg he will go at a speed that a good dog has trouble to match. The use of the dog in stalking is practically restricted now to following the blood-trail in these latter days when owners of forests wish to keep them as undisturbed as possible. It is said that a stricken stag will always go "home"—to a place of sanctuary, or some well-known wood—there to be cured or to die, according to the nature of his injury.

Should you happen to find yourself directly above the stag you are stalking, it is wonderful how closely you may approach him, even if the hill-side be quite bare of cover. By lying flat on your back, dragging

yourself down over the incline, of course taking advantage of every patch of heather or slight dip in the ground that can give partial concealment, you may get near the herd although apparently in full sight of them, and though they are in full sight of you all the while. Deer, as has been said, look up the hill-side far less often than they look down. If you see one of them gazing upward with suspicion, become motionless instantly, and do not resume your painful descent till he or she resumes feeding, or turns head in the other direction. On the other hand there is a condition of the atmosphere—that of frost—that seems to diminish their power of smell very considerably, and when there is frost in the air you may approach them more closely without giving them your wind than at any other time. But this is a condition of the air in which sound travels very easily, both to the human ear and to the quicker sense of hearing of the deer.

It is not necessary to say much about the best costume or colours for the stalker. Few men will care to go stalking in trousers. The kilt should be worn only by the born Highlander. Knickerbockers or breeches remain. For colour, the extremes of dark and light equally should be avoided, but for the rest your stalk may take you over ground of such varied hue that no general rule is very useful. Perhaps it is well to wear knickerbockers and coat of different colour, for Nature does not deal much in masses of colour. She is in infinite variety.

Nor perhaps would it be furthersome to give a

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WHEN YOU CANNOT RISE.



A DOWN-HILL SHOT.

TO THE
ADVENTURE



OFF THE KNEE.



RUNNING DEER AND MAN TARGET.

description of the different attitudes and rests that may be adopted in taking the aim. It would be long and difficult to do this in written words, and a few lessons from the stalker or a friend before starting will demonstrate them much more readily. It goes without saying that a rest should always, if possible, be taken, that the breath should be held while pressing the trigger, and that pressing is the right word, not pulling, for the steady movement of the finger that shall fire the shot. For a shot at a standing stag the lying position, on the face, if you can get a rest for the barrel, is most deadly, but the sitting position, with an elbow on each knee, allows better freedom of movement for following the movements of a running stag.

The kind of shot that is most often obtained varies a good deal in different forests. There is one well-known and very flat forest on which nearly every shot is a standing one at long range, after a long crawl in on the deer. By standing shot I mean, of course, that the quarry is standing. The owner of this forest generally takes his shot off a pad made of his rolled-up overcoat, which has been slung over the ghillie's back. It is a plan that gives such a convenient rest that one wonders it is not tried more often. Of course it is only good when one has lots of time to make all arrangements, and only useful for the lying shot.

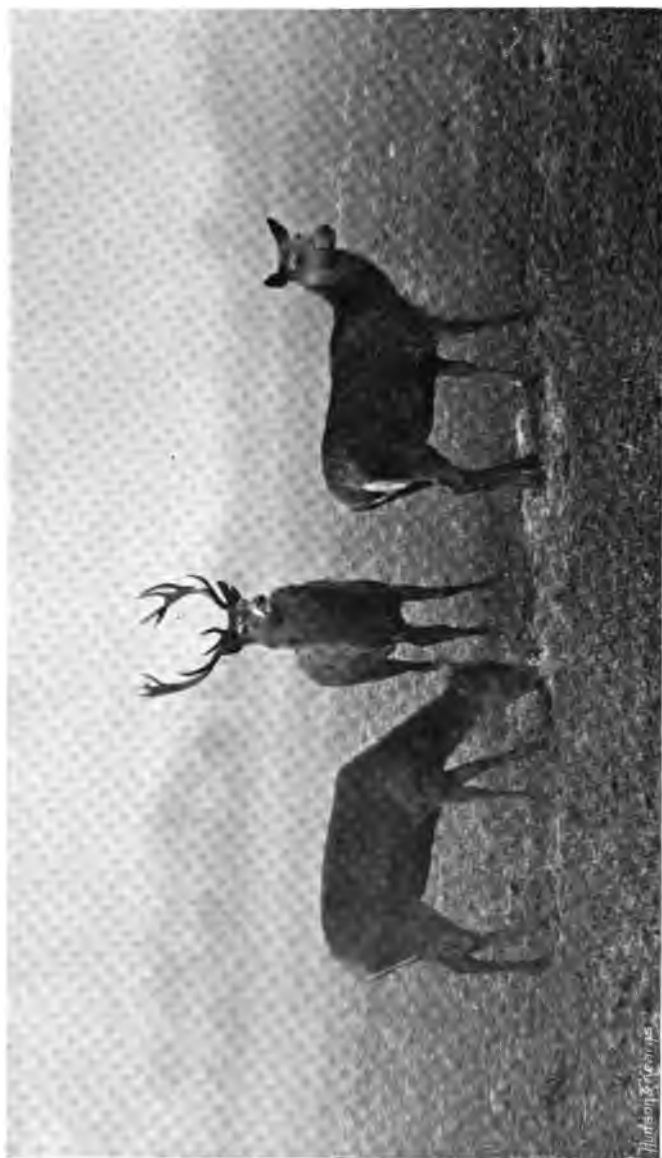
When crawling downhill, in sight of the deer, there is yet another position when you do not dare rise up so far as to get the sitting posture. Only

the lower corner of the rifle stock gets any rest on the shoulder, but the eye is aligned with the sights and the barrel is rested on the leg. The recoil is not felt, but it is a position rather dangerous to try with the Lyman sight, because the recoil is a little apt to bring it back on the shooter's eye.



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TO WHOM BELONGS



WHO COMES HERE?



CHAPTER IV

PARK RED DEER AND THE WARNHAM COURT HERD

By C. J. LUCAS

FROM Sutherland to Sussex is a far cry. From the heather-covered hills, grey rocks, brown peat bogs, and storm-swept forests of Scotland, to the smiling landscape of the South Coast, with its green pastures dotted with oak, elm, and chestnut, and bespangled with buttercups.

Walk to the end of the garden terrace and watch the herd of red deer, shut off by a high fence from the yet uncut hayfield, some peacefully grazing, others lying under the shade of the spreading trees to escape from the heat of the summer sun.

People pass to and fro. A motor-car buzzes up the park drive not fifty yards away. The deer look up startled, perhaps they all trot off some hundred yards, and turn again to gaze, but, like enough, they do not stir. How different from the red deer of the forest! those shyest of shy animals, which dash off by the score at the sound of a rolling stone, of the whirring flight of a pack of grouse, or at a whiff of the scent of man.

Yet they are of the same race, with the same instincts and the same habits. And England and its parks would scarce be England without their charming presence, for has not Richard Jefferies truly said, "A park without deer is like a gallery without pictures," a wilderness without the wild creatures that once roamed there in all their pristine freedom.

William the Conqueror may be held responsible for the introduction of fenced-in parks in Great Britain, for amongst other innovations which he brought with him from Normandy he introduced sports and a love of the chase, which in England had only previously existed in the cause of necessity. The Britons even under the Cæsars had only hunted from the necessity of procuring fresh meat, and every peasant had a right to hunt the wild deer with their hounds and long-bows. William the First changed all this, and he and his barons and dependants began to surround tracts of suitable pasture and forest land with fences, within which enclosures they could both find amusement and a plentiful supply of fresh meat,

without the extreme fatigue of the chase. The destruction of deer by the peasants was then made a capital offence, and so the deer in the parks increased in numbers, until the time of Cromwell, when a short era of chaos and destruction commenced, and lasted until the restoration of Charles II. Since this date two-thirds of the English deer parks have sprung into existence, and every year sees fresh additions to the number, for their charm is never-failing, and the pleasure derived from the contemplation of these most beautiful animals is greatly appreciated in an age when what is beautiful in Nature is becoming daily more recognised.

As the deer of Warnham have become in some sense well known owing to their remarkable horn-growth, I have been asked to give some history of the formation of the herd, and early state of the deer and their gradual improvement. Having spent the best days of my life practically in the midst of this herd, it has ever been a pleasure to me to watch the deer and study their various little idiosyncrasies ; but, before proceeding, I should like to say a word or two on the horn-growth of stags as they exist in a forest state, because the two conditions, namely, dry or wet seasons, and the condition of the pasturage, are somewhat dissimilar in effect on wild Highland deer, and those kept within the enclosure of a park.

There is a common contention that in the north a cold and wet season produces heavy beasts with poor heads, but this view is, I am sure, a fallacy, for if the deer come out in a cold and wet spring,

both bodies and antlers alike suffer. The critical time for deer is always the spring, when the animals, having gone through the privations of the winter, which do not unduly distress them, find themselves called upon to live on more or less rotten food, and lie for a period of from two to three months on wet couches. This is particularly the case in the mountains of Ross-shire, where deer are superabundant, and where, with one or two rare exceptions, they are entirely neglected. Early spring being a critical time in a deer's life, and most springs being severe and wet in the northern forests, it is quite impossible that with the quantity of deer upon the ground they can ever become good animals unless hand fed. When the summer pasture does come it is generally too late to bring these beasts out of their miserable condition, and so year after year we see the same wretched antlers. In the early spring in the Highlands, before the grass has properly commenced to grow, the deer subsist very largely on a species of moss, whose scientific name I am unable to give; and this food, containing a quantity of lime-like or animal matter, is said by many experienced foresters to be the best diet for starting successful horn-growth. They feed on this until well into May, and then take readily to the young grass that is springing up. A wet summer, which always produces an extra abundance of young grass, though a thing to be desired in our southern parks, is not always a blessing in the Highlands, for though it may produce in the north, as here, an extra supply of herbage, yet the

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STAG AND HINDS.

TO VIVID
IMAGINATION



DEER IN AN ENGLISH PARK.

rain falling in torrents on animals which are still suffering from the effects of too much wet is often disastrous, and the deer, never lying down on a dry couch, become worried, fretful, and are constantly on the move day and night. If the deer of the north could only begin their summer in good heart, they could withstand this climatic rigour, and only hand feeding can enable proper conditions to exist. But, after all, it is easy to say what should be done, and those who have studied the natural wants of the animals are fully alive to the necessary conditions, yet it is hopeless to expect improvement in forests let to different tenants from year to year, as most of them are.

Now with us the natural advantages of southern English parks are only too manifest. We seldom suffer from severe winters, and when we do there are acorns, Indian corn, and other good things ready for the deer when food becomes scarce. Our parks are not overcrowded, and the great oaks and copses give a shelter which is denied to the poor frozen outcasts of the north. I say outcasts, for open barren hills are not the natural home of the red stag, and he has been forced there by unnatural conditions. In spring our deer get their medicine regularly in the form of ash and thorn boughs, and, best of all, the young green grass begins to spring early in April, just when the deer are in their poorest condition—which, however, in the south is never very low. Then if we get a wet summer—not one continuous deluge, but frequent showers all through the season, and occurring

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just when the pasturage is getting parched on the top—we are thankful for it, for it produces a continuous crop of fine young grass and clover all through the summer months, when the body and horns require their annual building up. The seasons 1900, 1902, and 1903 were ideal years in this respect, and we had grand heads on the finest stags, whereas 1901 was one of the driest seasons on record, and there was hardly a decent head in the park. In dry seasons, too, the hinds have considerable difficulty in calving.

Statistics are not things that fill the average reader with enthusiasm, yet as this article is primarily intended to convey a few suggestions to others on the arrangement of an English deer park, I hope I may be forgiven for imposing on those who peruse these pages certain facts, which, though dull to average readers, are nevertheless somewhat essential.

The herd at Warnham Court was started in 1851 by a red deer stag belonging to Mr. Heathcote's Hunt jumping into the park, and being given to the then owner of Warnham Court; and it remained the only red deer (there was a small herd of fallow deer) in the park until 1854, when two red deer hinds were purchased from Herring (dealer in wild animals in Chelsea), and the following year another hind was acquired from Sir Henry Clifford's park in Yorkshire. The area of the park was at that time about eighty acres. In 1865, when the property was purchased by my father (Mr. C. T. Lucas),

the herd had increased to thirty head ; but as the practice had been to kill the stags at six or seven years old, there were no very fine heads. In 1868 the size of the park was increased, and several importations of fresh blood were procured to improve the herd, viz. :—

1869. One stag, two hinds, and a calf from Mr. Beadle's park in Essex.

1871. One stag and two hinds from Lord Petre's park, Essex.

1876. Two hinds from Mr. Coleman's celebrated herd at Stoke Park.

1880. Two stags from the Duke of Norfolk, Arundel.

1888. Two hinds from Sir Henry Clifford's park, Yorkshire.

1891. Four hinds from the Earl of Derby, Knowsley.

1893. One stag from Sir Watkin Wynn, Wynn-stay, North Wales.

1896. One hind from a park in Norfolk.

1898. Two stags from Lord Ashbrook, Kilkenny, Ireland.

1899. One stag from Mr. Assheton Smith, Vaynol park, North Wales.

1901. Two hinds from Mr. Assheton Smith, Vaynol, North Wales.

1901. Two hinds from Earl Brownlow, Ashridge, Herts.

1903. One hind from Mr. Assheton Smith, Vaynol park, North Wales.

1904. Three hinds from the Earl of Derby, Knowsley.

From time to time further land has been taken into the park, and it now comprises (1904) about 300 acres; and the herd, which is considered the first in the kingdom, and probably in the world, consists of 160 head. By careful selection, by killing weakly calves, stags with narrow heads and small hinds, this very fine herd has been produced. I cannot trace any German blood in the herd, unless there may possibly have been some in the two hinds imported from Stoke Park in 1876.

Since 1881 half the park has been fenced off during the early summer and reserved for hay, and has been "dressed" every four years with artificial manure composed of bone dust and nitrates, and lately with basic slag. This has much improved the pasture, which, however, was never poor, and enormously increased the weight of the deer and growth of their horns. The average weight of the deer when killed is about 25 stone (14 lbs. stone) clean, weighed as in Scotland. This summer (1904) the hay crop has been very heavy, nearly 2 tons to the acre.

The soil is a good loam with a subsoil of marl clay, containing a large percentage of lime. Large oaks and clumps of trees about the park give good shelter in bad weather. Deer parks on many estates are often large tracts of poor land which never receive any dressing, and are constantly grazed without any rest to the land, consequently the pasture is always poor, also the beasts that live on it. Here



ON THE ALERT.

TO VINU
ABORIGINES



TROPHIES AT WARNHAM COURT.

the park of 300 acres, besides the yield of hay, has carried during a good summer as many as 160 head of red deer, 250 fallows, about 50 head of cattle, a flock of 250 Southdown sheep, and some emus, all living together in perfect harmony. During severe winters, when the ground is covered with snow for several days, the deer are given acorns (which are collected and stored in a dry shed in the autumn), and fresh-cut brushwood to eat, otherwise they live entirely upon the rich pasture of the park, which accounts for their abnormal growth of horn. In 1902 the largest head was produced with 47 points, the "cast" horn weighing 17 lbs. 1 oz (the "cast" horns of this beast for nine successive years hang in hall at Warnham Court); and it is not an uncommon thing to see several deer in the park at any season with from 20 to 30 points. (See *British Deer and their Horns*, by J. G. Millais, in which are shown many reproductions of photographs of Warnham heads.)

Once a year, in September, the whole herd is driven into an enclosure surrounded with oak pale fence about 12 feet high, a portion of which is divided into "pens," where the deer are sorted and looked over, the calves marked on the ears—a different mark each year—and their sex noted in a book. It is curious and interesting to find that some years by far the larger majority are stag calves, and *vice versa*. The deer are returned to the park one by one after being counted, eighteen being retained for the use of the Warnham Stag Hunt,

and others to be sent away in exchange to other deer parks, or sold to owners of forests in Scotland and Ireland. These are put into crates, the stags' horns being sawn off, and despatched by train to their destinations. About thirty are disposed of in this way annually.

I am of opinion that the abnormal growth of horn in the Warnham herd is caused by the richness of the pasture, careful selection of fresh blood, killing weakly animals when young, and retaining a large percentage of adult stags in the herd. In many parks about half a dozen stags are considered sufficient : here about a third of the herd are stags ; consequently in the breeding season the big stags take possession of a few hinds each, instead of, as is often the case in parks and in the forest, one stag getting the whole herd of hinds until he becomes so weak that he is forced to make way for another.

I find that any peculiarities in antlers are repeated every year, being more fully developed as the beast grows older, until it becomes twelve to fourteen years old, then it begins to "go back," on account, no doubt, of the teeth becoming worn down, causing insufficient digestion. The celebrated "big Warnham stag" lived to be fifteen years old, when it was killed. Its horns had gone back considerably during the last two seasons of its life. There has never been a "Hummell" or perpetual "switchhorn" in this park. The yearling stags' horns (their first horns) are often long switches with short brows like a Scotch wild switchhorn ; but many have six points,



THE BIG WARNHAM STAG.

TO VINU ANAGALLA



A WINTER GATHERING.

three on each horn, their first year. In 1903 a yearling carried nine points on his first horns, which I believe is unprecedented, and this year eighteen points. I am hoping that this beast will produce in time an extraordinary head. The stags are generally "royals" and over at three years old, *i.e.* their second growth of horns. Two stag calves are castrated annually for the use of the Hunt. These are termed "Heviers," and never grow horns, and look like "Hummells."

I do not recommend wild deer from Scotland being turned into a park; in my opinion the cross is not good. Rather obtain the best blood from other parks. On the other hand, park deer will improve a wild Scotch herd considerably if well managed. I believe the best plan is to form a "park" of about 50 or 60 acres, surrounded by strong wire fencing, in a suitable part of the forest near the stalker's house, in a sheltered position where the feeding is good. Catch up and enclose about thirty to fifty wild hinds, and turn in with them, say, two four-year-old park stags, and half a dozen park hinds; in this way a cross is assured. Let out the hinds with their calves in July or August, retaining the stags for a fresh lot of hinds the following season. The "park" may be temporarily divided to keep the stags in a small portion while the fresh lots of hinds are being enticed into the park, and when sufficient are caught up the temporary division may be removed. If park deer are turned out direct into a forest, the chances are they will roam

away, or be driven by wild deer to other forests, where they may be killed, and the certainty of a cross lost. No doubt deer in a "park" of this kind in the Highlands of Scotland will require feeding during the winter, which, besides improving their growth, will induce them to remain "on the ground" when released with their calves. I have known this system carried out with success; and it is a good plan to mark all, or as many as possible, of the wild hinds caught up, it being interesting to notice if the same hinds are enticed into the park from the forest on several successive seasons.

Before closing this article I will insert a few lines sent to me by my friend and neighbour Mr. J. G. Millais. They deal with such stags as have grown abnormally large heads since 1895, when his book on the subject was written.

Whether or not the great 47 pointer (he says) left his stamp on the present herd is somewhat open to question, as he was ever a retiring beast, and from the very fact that he possessed such extraordinary massive weapons of defence, like the double-handed broadsword bearers of Richard I., he was unable to use them, and so had to resign the mastership of the harem to more favoured, though less desirable rivals. For one short season we know he had his little day, and this may have been the time when he fathered the three remarkably fine stags which came into life between the years 1890-1892. These soon attracted notice by the unusual horn-growth in young stags, and it was for this reason that their horns were collected and respectively considered from year to year, under the titles of A., B., and C. From their fourth pairs, each of these fine stags have shown

a disposition to crown at the top, and now, though one, C., is no more, B. is in his prime, and A. past his best. The horns of each have all exhibited a type similar to those thrown out of the great stag, and in one case, C., are almost as fine as that of the great stag himself. This is more especially seen when viewing the successive antlers of each, for, like their approved father, they each have possessed a similar-shaped crown, though without so many points, having the front upper prongs splayed out and forked in a similar manner. The following are the numbers of points of these three stags during successive years :—

	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
A.	...	...	...	...	...	15	18	20	20	22	19	21
B.	...	...	...	...	...	...	...	23	23	25	21	28
C.	pricket	16	17	19	20	21	30	30	27 ¹	17	32 ²	...

I have often noticed young stags carrying 16 or 17 points at three years old, *i.e.* on their second pair of horns, and there is little doubt that C. was the father of nearly all the young deer in the park at the present time. During six successive years he held the whole of the first part of the rut. In the autumn of 1901 his mastership was disputed on three occasions, and he was finally ousted from his proud position by a young royal. I was witness to the second battle, when the two stags fought continuously for half an hour. I never saw two stags fight more desperately, charging and sticking one another with a fierceness that seemed to forebode the death of one or other of the combatants. Eventually the young royal won the day, and

¹ Weight of dropped horn, 16 lbs. 10 oz.

² When killed in 1902, this stag's horns were quite equal in weight and size to the 47-pointer, but without possessing quite so many points. It is not too much to say that this is the second largest stag's head that has been produced in an English park.

knocked the old fellow clean off his legs, and caused him to retreat. Each stag was then so exhausted that he went and lay at full length on the grass for some ten minutes. The young royal, however, rose first, and went and took over the entire stock of hinds. The old stag, after lying for about twenty minutes, rose, and went into a corner of the park, where he sulked in chagrin for two days without moving. About a month after this he had another fight with the young royal (which Taylor, the keeper, witnessed), and smashed both his horns to pieces, but was again defeated.

These few lines give my experience of the deer here. There are far larger parks and herds, much longer established, in various parts of England, but I think I may claim that there is no finer herd, at the present time, than that at Warnham Court, Sussex.





CHAPTER V

SCANDINAVIAN RED DEER

By SIR HENRY SETON-KARR, C.M.G., M.P.

RED DEER are indigenous to Scandinavia, as they are to nearly the whole of Europe. The pine and birch forests of the Norwegian coast-line and the thickly wooded islands in the fjords form a natural home for this species of European *cervidae*, wherein, no doubt, it has been found and more or less hunted from time immemorial. The fossil remains of red deer long since discovered in the peat-bogs of Scania, among other places in Norway, may, I think, be taken as conclusive evidence on the subject.

Having stated the general theory, I feel bound to admit that Norwegian red deer are not now too numerous. It is possible that at one time they were more plentiful in the mainland forests both of Norway and Sweden than they are at present. A native theory is that the increase and incursion of the Russian wolf a generation ago thinned the numbers of red deer as well as elk, and drove the former for safety to the islands of the western seaboard. The severity of Scandinavian mainland winters and the depth of the snow-fall is no doubt another reason why red deer are not too plentiful in inland valleys. Of the islands that fringe the Norwegian coast, Hitteren has by far the best stock of deer, and is in fact the only part of Norway that I know of worthy the name of deer-forest, so far as red deer are concerned. This island lies slantwise across the mouth of the Thronhjøm Fjord, and some three miles away from the rocky coast-line of the mainland, within measurable distance of the Arctic circle, but saved from an Arctic climate by the warm current of the Gulf Stream.

It may naturally be asked, Why is Hitteren the only place in Norway worthy the name of a red deer forest? There are many other islands in the Thronhjøm Amt, near the Namsen, in the Hardanger, and elsewhere on the western coast, as well as portions of the mainland, almost, if not quite as well suited in climate, area, locality, and vegetation to shelter and feed a good stock of deer. I believe the chief reason for this singularity is the fact that



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Hitteren is the only spot where protective laws have been thoroughly well observed as well as passed. The island was discovered by Englishmen a generation ago, and has been more or less leased by them ever since, partly owing to its accessibility. The native owners thus came early to recognise the commercial value of their sporting rights, and have done their best in consequence to maintain the character and value of these rights, which now form their most valuable asset. For the last fifteen years or so hinds have been protected in Hitteren not only *de jure*, but also *de facto*, and consequently the number of deer has not only been maintained but has increased. Recent Norwegian legislation now allows hinds as well as stags to be killed, in equal proportions up to the legal number limit on each farm. Where the farms are leased by Englishmen, this enactment has done no harm, as the lessees are sportsmen who only kill stags. On outlying farms it has had a bad effect, for the natives spare neither age nor sex.

On Hitteren we usually killed about a stag a day to the party. In the autumn of 1895 our party of four rifles for a fortnight—and the writer alone for another fortnight—killed twenty-eight stags in twenty-seven days, partly stalking and partly driving. Several of the stags weighed over 20 stone, and one scaled no less than 386 lbs. (27 st. 12 lbs.) clean as brought in next day from the field. His dimensions, which I took at the time, were as follows :—

	ft.	ins.
Height : From top of shoulder to centre of fore- hoof	4	3
Girth : Behind shoulder	4	6
Length : From centre of forehead (base of horns) along back to tip of tail. . .	6	4

This is the heaviest stag I have known killed on the island. Hitteren heads are somewhat irregular in number of tines, being in this respect rather inferior to Scotch heads. We killed many 20-stone stags with heads of from seven to eleven points; and in some cases with switch-horns—such stags, as all stalkers know, being often the heaviest beasts. Once only, in an experience extending over twenty-three years, have I killed, or seen killed, a full Hitteren royal; though I have been shown one or two fine royal heads shot elsewhere on the island. On our forest ten and eleven pointers have been fairly common. In beam and roughness of horn Hitteren heads are usually superior to Scotch.

Hitteren stalking is a somewhat different art from that of Scotland. In the first place, it is woodland stalking; though occasionally I have enjoyed a stalk, after a spy a mile or so away, equal in duration, exercise, and excitement to anything that can be obtained in Glen Affric, Atholl, or Reay.

Wood-crawling, however, is the chief characteristic of Hitteren stalking; and if the test of true sport is to outwit and slay a wild animal in its native home, then the stalking of which I write is sport of the truest and most natural description. And there is this additional inducement, that, in order to be

thoroughly enjoyed and made the most of, it should be undertaken alone ; or the sportsman should, at all events, be master of the stalk, and, the deer once found, far or near, approach and shoot on his own responsibility—and not, like an obedient dog, crawl, ignorant of the science of the stalk and the why and the wherefore of its details, at the heels of a professional native.

There are at least two good reasons why the amateur Hitteren stalker should, after he has acquired some knowledge of the ground, go alone. First, because a really scientific native stalker is the exception rather than the rule ; and, secondly, because two men crawling like conspirators through wood and glen in search of a warrantable stag make at least double the noise of one, and the aforesaid stag is so much the less likely to be seen, or, if caught a glimpse of, to afford opportunity for a shot.

From early dawn until 9 A.M., and from 4 P.M. or so until dusk, are the proper times to find and kill a Hitteren stag. No one who has not tried it can realise the futility, as I may call it, of endeavouring to find and kill a woodland stag when couched. He usually lies—and the better the stag the more certain the rule—throughout the day, generally between two winds, with a good view to leeward, at times chewing the cud, and with eye, ear, and nostril alive to every hostile approach or unusual sound. The odds are then all in his favour, and an inexperienced sportsman might walk through Hitteren woods for hours in the day without seeing a single

deer, or knowing how many had seen, heard, or winded him and departed unobserved. The yellow-brown body harmonises so exactly with pine trees, yellow marsh, and purple heather, that, even when on the move and feeding, the deer is not so easily picked up, and when couched the difficulty is tenfold increased.

Walking carelessly through Hitteren woods, I have occasionally and by chance jumped and killed a stag, when a strong wind and the nature of the ground happened to lend itself to the operation, after having, perhaps for days before, stalked favourite glens and corries without the chance of a shot. Twice have good stags been driven into my arms, so to speak, unwittingly by a comrade—without having been seen by him—when he and I were stalking neighbouring beats.

I have spoken of the native stalkers of Hitteren. None of them, so far as my experience goes, can compare for science and skill with the best Scotch stalkers. The most scientific Norwegian stalker I ever met, and a thoroughly accomplished and unscrupulous poacher, was a schoolmaster on the island of Tusteren. This by the way. But many of the old Hitteren natives have served a long apprenticeship in wood-stalking with a "gammel Norske rifle," a ponderous muzzle-loading rifle of wondrous dimensions, a marvel to see. Up to 100 yards this weapon threw a heavy round bullet from a barrel 5 feet long or so with great accuracy. The native "Norske-Jager," who seldom missed a standing chance at point-blank range, generally took a rest on some

moss-covered rock or bunch of heather. I know several Hitteren natives who tell me they have killed in old times their hundred deer. At a moving or running deer they never used to shoot. The Norske rifle is useless for the purpose. Occasionally they drove to passes, when the wily hunter would endeavour to stop the passing deer by a whistle or imitation bellow, and so get a standing shot. If this device failed, the trigger was not pressed. I shall never forget the contempt displayed many years ago by the Tusteren native hunters for my single .500-bore Henry Express rifle, the first some of them had ever seen. Alongside the "gammel Norske rifle" it looked a mere toy. It was only by practical proof of its effect on the body of a stag and a display of its trajectory on the fjord that I finally succeeded in dispelling this contempt. The more experienced Hitteren native has the greatest respect for modern sporting rifles and the value of their handiness and low trajectory in the case of moving or running shots.

A favourite native method of procedure is, at early dawn or in the evening, in the rutting season when stags are belling, to imitate the bellow of a stag. The better, and therefore the more bellicose the stag, the easier he falls a victim to this deception. I will not discuss the ethical question as to whether or not this is a depraved form of sport, and the perpetration of a low and shameful fraud on a noble animal. It is certainly practised in most woodland countries, and I have occasionally on Hitteren participated in and enjoyed the process. From a

breeding point of view, moreover, it is obviously better to kill a master stag after rather than before the commencement of the rut.

An important variety of Hitteren sport is deer-driving, which we used to practise mostly in September.

"This is not sport," I think I hear some one say. My answer is, Try it and see. By deer-driving I do not mean sending a yelling horde of men to try to drive the deer like so many sheep. As a matter of fact, deer cannot be driven like sheep, except with an army of men, and at the risk of completely ruining your ground. Deer-moving is a term that would better express my meaning. Five or six men are required to go quietly through a mile or so of wooded hill and glen. They should all be experienced sportsmen, with some knowledge of the ground and the habits of the deer. The human voice should not be heard. A low whistle or a tap of tree is the best method of communication, in order that the men may keep their distance and line. The direction and strength of the wind and the nature of the ground must be carefully taken into account ere plans are laid and carried out. The rifles are placed in passes, or between lakes, and it is often no easy task to get them to their post without moving deer back into the beat and so spoiling everything. Generally speaking, deer-driving requires careful planning, good generalship, and experienced execution ; even then, unless luck be with you, the best-laid plans may all go wrong. A woodland stag is one of the most cunning

and artful animals alive. He cannot be driven by noise, and frequently breaks back past the drivers, apparently warned by some mysterious instinct of a hidden danger in front. But if all is well arranged, and luck be with you, a master stag or two may trot or gallop through the trees, disturbed, but generally not seen, by the men, past a rifle.

Let us here remark that it takes long experience of this variety of the sport to ensure successful results. Ensure, did I say? It is too dogmatic a word. The results of a deer-driving shot can never be ensured. It is an instinctive action with little time for thought. The moment at which to take the shot must be promptly seized. A few seconds' hesitation, a hasty or ill-timed movement, and the opportunity may be lost, and nothing but the track of a "stor hjort" left to mark the event.





CHAPTER VI

NOTES ON CONTINENTAL RED DEER, WITH A SUMMARY OF HORN-MEASUREMENTS

By Sir HENRY SETON-KARR, C.M.G., M.P.

THE scientific theory, as indicated by the naturalist, Mr. R. Lydekker, in his book, *Deer of All Lands*, published by Mr. Rowland Ward in 1898, is that Central Asia was the original home of the red deer group of *Cervidae*; that one branch of this group spread westward over the greater part of Europe, to the south of Sweden, and to the islands of the Norwegian seaboard; to Great Britain, France, Spain, Austria-Hungary, Turkey, Greece, and Italy; also doubtless to Switzerland, whence they have long since disappeared; that this branch is now represented by what we may call the modern red deer of Western Europe, whose finest specimens are found in Continental forests, and whose smallest representatives, on the other hand, inhabit such small islands as Harris, off the north-west coast of Scotland. This branch of the original group is also supposed to have spread southward to North Africa, when that continent was in immediate geographical connection

with Europe, and which now possesses as its sole antlered representative the Barbary stag. In this prehistoric southward migration a few small specimens of the branch appear also to have been dropped, *en route*, on what are now the islands of Corsica and Sardinia. The second branch of the red deer group is now usually taken to be represented by the Maral or Eastern race of red deer and by the four races of Wapitis—wapiti being an American Indian name. These four races of wapitis, still according to Mr. Lydekker, are the Central Asian or Altai wapiti, the Manchurian wapiti of North-Eastern Asia, and the two varieties of wapitis that are supposed to have migrated in prehistoric times by way of Behring Straits, presumably when there was less water there and more land, to the North American continent.

President Roosevelt, in his book on the Deer Family, confirms this distinction between the American wapiti of the Pacific Coast and the East American or Rocky Mountain wapiti, the latter being shorter-legged, more heavily built, and rather lighter in colour, with some alleged small differences in shape of skull and horns. With all due deference to the above-quoted high authorities, I am inclined to look upon these distinctions as a little fine-drawn. To my mind both these races of wapitis are to all intents and purposes identical species of the same magnificent deer, admittedly the finest race of the whole red deer tribe or group.

For general purposes of comparison it may be useful to give here the following summary from Mr.

Rowland Ward's well-illustrated and very complete and accurate tables of horn-measurements contained in his *Records of Big Game*, now in its fourth edition. It will enable the reader to survey and contrast the measurements of the best antlers of the various branches of the red deer group.

Taking the Rocky Mountain wapiti first, we find recorded the measurements of seventy-three heads ranging from 65 inches to $50\frac{1}{2}$ inches in curve length. Only fifteen heads are 60 inches and upwards in length. The beam or circumference between bez and trez ranges from $9\frac{1}{8}$ inches to $6\frac{1}{2}$ inches; the number of points from twenty to eleven, the large majority being twelve or thirteen.

The distinguishing feature of the wapiti group is absence of cupping on the crown of the antler. Instead of this the top tines are elongated in the same plane, the fourth tine being invariably the longest and heaviest of all in a good mature head. Nearly all the above-mentioned heads have been obtained by British sportsmen.

Of the West American wapiti only three measurements are recorded, 52 inches being the longest curve length, with a maximum beam $8\frac{1}{2}$ inches, and there is one seventeen-pointer among the three, which are all from the island of Vancouver. There is some tendency to cupping and to palmation in the antlers of this race.

Turning to the Thian-Shan or Altai wapiti, we find measurements of twenty-two different heads,

showing curve lengths of from 55 inches to $43\frac{1}{2}$ inches, a beam varying from 9 inches to 6 inches, and a number of points varying from nineteen to twelve. The best Altai wapiti, killed by a sportsman, was shot by Mr. P. Church—a thirteen-pointer, 54 inches in length of horn, $7\frac{1}{4}$ inches beam, and $50\frac{1}{2}$ inches spread. This compares favourably with an average Rocky Mountain wapiti, but is inferior to the best of that race. No Siberian wapiti head measurements are available, while the five Manchurian wapiti head measurements recorded are quite inferior, the greatest curve length being only $33\frac{1}{4}$ inches. The probabilities are that this race has not yet been properly sampled by British sportsmen.

Coming now to the Eastern red deer or maral, from the Caspian Provinces of Northern Persia, the Caucasus, and the Galician Carpathians, we find the records of twenty-four heads measured, ranging from $48\frac{1}{2}$ inches to $41\frac{1}{8}$ inches in curve length, $8\frac{1}{8}$ inches to $5\frac{1}{4}$ inches beam, and from twenty-one points to eleven points in number. Some of the finest of these deer have been shot by such well-known big-game hunters as Mr. St. George Littledale, Prince E. Demidoff, Sir Edmund Loder, Mr. H. J. Elwes, Mr. E. N. Buxton, Mr. F. C. Selous, and other Englishmen.

Closely akin to the above-mentioned species of red deer are the Shou, or red deer of Bhutan, eastward of Shumbi, and the Hangul or Kashmir deer. Not too much is known of the former deer; but measurements of sixteen heads are given, ranging from

55 $\frac{3}{4}$ inches to 39 $\frac{3}{4}$ inches in curve length of horn, with a beam of from 9 inches to 5 $\frac{3}{8}$ inches, and with points from thirteen to nine in number. Of the Kashmir stag, a more accessible and better-known animal, the particulars of thirty-seven heads are recorded, with a curve length of from 48 $\frac{1}{8}$ inches to 40 inches, a beam of from 8 inches to 4 $\frac{1}{2}$ inches, and with points from sixteen to eight in number. Most of these trophies also have been secured by British sportsmen.

In addition to the above, there are four records of the Yarkand stag, from Eastern Turkestan, with a curve length ranging from 40 $\frac{1}{4}$ inches to 39 $\frac{1}{4}$ inches, a maximum beam of 6 inches, and with points from thirteen to ten in number.

It is instructive now to turn to some of the recorded measurements of the purely Western red deer, ancient and modern. Four German red deer in the collection of Viscount Powerscourt have a curve length of 52 $\frac{1}{2}$ inches to 42 $\frac{1}{2}$ inches, a beam of 10 $\frac{1}{2}$ inches to 7 $\frac{1}{2}$ inches, and the number of points are respectively twenty-five, twenty-three, twenty-one, and eighteen. These heads were bought at Munich in 1863, with other fine specimens. Of more modern specimens, there are six records of Hungarian stags, some of the trophies of their Majesties the German Emperor and the Emperor of Austria, shot in 1868 and after. The curve lengths of these trophies range from 41 $\frac{1}{2}$ inches to 37 $\frac{3}{4}$ inches, the beam of antler from 7 $\frac{1}{4}$ inches to 5 $\frac{3}{4}$ inches, and the number of points from seventeen to twelve.

SCOTCH RED DEER
(KILLED IN RHIDDORROCH, 1840).



SCOTCH RED DEER
(40 INCHES WIDE).



IRISH RED DEER FOUND
IN A BOG.



SPECIMENS AT POWERSCOURT.

TO VIND
APPROVED



A FINE RED DEER HEAD.

CONTINENTAL RED DEER 101

There are also some more modern Alpine specimens from Upper Austria and Styria, obtained in 1881 and later, also the property of the same royal sportsmen. Six recorded measurements of these trophies give a curve length of from $41\frac{7}{8}$ inches (the finest Alpine red deer known) to $34\frac{7}{8}$ inches, a beam of $7\frac{1}{2}$ inches to 4.7 inches, and with points from seventeen to eight in number.

We now turn to the records of ancient British and Irish specimens, found in the Manchester Ship Canal excavations and elsewhere in the United Kingdom. The particulars of eleven heads are given, with a curve length of from $47\frac{1}{2}$ inches to 33 inches, a beam of from 8 inches to $4\frac{3}{4}$ inches, and the number of points range from twenty-four to thirteen, no less than seven of the heads being of nineteen points or over.

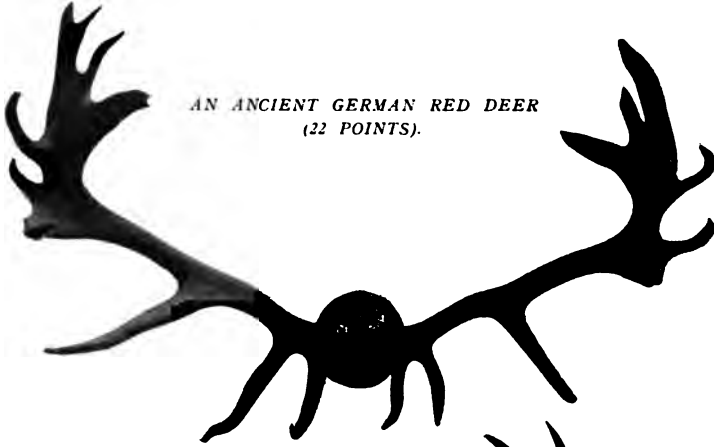
I have in my possession a fine old red deer head obtained by my grandfather. It is either an old English head or one brought from the Continent. Its measurements are: curve length of horn, 43 inches; beam, 8 inches; points, 21 (10 + 11). A photograph of this head, taken by Mr. Rowland Ward, is reproduced opposite. The above-mentioned records are sufficient to indicate the class of red deer heads formerly obtained in Western Europe and the British Isles, and how they compare with the best Eastern red deer of to-day. It is clear that in weight of horn and number of points the best of them are remarkable, and can in these respects fully hold their own with the largest of any

of the modern red deer group, and that in some cases they even approach in length of horn the best of the latter, with the exception of the American wapiti.

Let us turn now to the records of modern wild Scotch heads. The comparison is instructive. Mr. Rowland Ward gives the particulars of upwards of ninety red deer heads from all the best modern forests in Scotland. The curve lengths of these trophies range from 41 inches to 30 inches, two only being over 39 inches; the beam or circumference of horn, between bez and trez, ranges from 7 inches to 4 inches, the large majority being under 6 inches; and the number of points vary from fourteen to six, the large majority being ten, eleven, and twelve pointers.

It is clear from these statistics that the Scotch red deer of to-day has degenerated in length and weight of horn, and particularly in number of points, as compared with his more vigorous and lusty ancestor, and that he is an inferior animal to the Continental red deer.

The records of some fine Irish stags are given by Mr. Rowland Ward, from Colebrooke, Powerscourt Park, and Muckcross. The curve lengths of horn of nineteen specimens vary from $42\frac{1}{2}$ inches to $30\frac{1}{2}$ inches, the majority being 35 inches or over. The beam varies from 6 inches to 4 inches, and the number of points from nineteen to ten. Some of these stags were over 25 stone clean weight. There are sixteen records of West of England red deer, mostly from Exmoor and Quantock. The curve



AN ANCIENT GERMAN RED DEER
(22 POINTS).



GERMAN RED DEER
(19 POINTS).



A VERY FINE HEAD
(BOUGHT AT FRANKFORT).

SPECIMENS AT POWERSCOURT.

TO VIKU
AMROHIAO



NEW ZEALAND HEADS.

lengths of horn in these cases vary from 41 inches to $34\frac{5}{8}$ inches, and the beam from 6 inches to $4\frac{3}{4}$ inches, the large majority being over 5 inches in beam. The points vary from sixteen to ten in number.

The records of eighteen English park red deer, from such places as Woburn, Welbeck, and Warnham, give curve lengths of horn varying from $42\frac{1}{2}$ inches to 33 inches ; a beam from $7\frac{3}{4}$ inches to $4\frac{1}{2}$ inches ; and with points varying from such numbers as forty-five, forty-four, and forty, down to ten.

Mr. Rowland Ward's records of New Zealand stags are also of considerable interest, these being Scotch red deer imported to an obviously congenial environment in the antipodes. The horn curve lengths of eighteen specimens vary from 42 inches to $31\frac{1}{2}$ inches, no less than six being 39 inches or over, and all but two over 35 inches. The beam varies from $9\frac{1}{2}$ inches (an abnormal weight of horn for a modern red deer stag) to 5 inches. The points vary from twenty-two in number to ten, the majority being over twelve.

By the courtesy of Mr. Seddon, the Premier of New Zealand, I have lately received the horn measurements of thirty-one stags shot in the Wairarapa district. The longest curve length of these is 42 inches, and three others are over 40 inches. The large majority are 35 inches or over, and with corresponding beam. The photographs of two of these heads are reproduced opposite, including the twenty-two pointer recorded by Mr.

Rowland Ward. Although this is an obviously heavy head, I am inclined to think the beam measurement of $9\frac{1}{2}$ inches mentioned above must have been taken between brow and bez, and not as the minimum between bez and trez, which is the recognised standard.

In March 1902 Mr. Allan Pilkington, a relation of the writer's, and a son of Mr. Thomas Pilkington of Sandside, Thurso, N.B., shot a New Zealand stag in the Wairarapa district of twelve points, a beautiful royal with very long tines, $38\frac{1}{2}$ inches in length along curve of horn, and $6\frac{1}{4}$ inches in beam between bez and trez, that compares favourably with the majority of the above-mentioned New Zealand records. Both brow antlers are over 13 inches in length.

Mr. Rowland Ward's records of red deer heads from Norway and Spain may, in conclusion, be mentioned. Nine Norwegian specimens have a curve length of from 34 inches to $29\frac{1}{4}$ inches, a beam from 5 inches to $4\frac{1}{4}$ inches, and with points from twelve to seven in number. All these come from the island of Hitteren. But I know of several Hitteren heads, whose measurements have not been sent to Mr. Ward, that are considerably better than any of the above, including a very fine ten-pointer shot many years ago by my friend the late Mr. R. Staples, jun., of Dunmore, Queen's County, Ireland. This head, the finest Hitteren trophy I know of, was nearly 40 inches in curve length, and 6 inches in beam. Another fine eleven-pointer, secured in 1872 on the

same ground by my friend Admiral Sir William (then Captain) Kennedy, was very nearly as good.

Of the ten Spanish specimens recorded, the curve lengths of ten heads vary from 40 inches to $22\frac{1}{2}$ inches; and the beam from $5\frac{3}{4}$ inches to $4\frac{1}{4}$ inches. All these stags, with the exception of one eight-pointer, carried from ten to seventeen points. It appears that there are two races of red deer in Spain, the larger in the "sierras" or mountains, where good heads run from 30 to 40 inches; the smaller in the "cotos" or wooded plains, where the heads rarely exceed 30 inches in curve length. This distinction may be taken as further evidence in support of the general principle elsewhere indicated, that for the growth of good wild red deer heads a varied range, with some mountain pasture, is required.

In compiling these notes largely from the authoritative works already mentioned, I have thought it opportune, and germane to my subject, to summarise what I may term the absolute horn measurements of the various races of the red deer group, in order that sportsmen may compare for themselves the relative sizes of the antlered trophies that they yield. The size and beauty of a wild red deer head is not always and necessarily the measure of the sport and the enjoyment obtained in his pursuit. But it obviously has a great deal to do with it, and the average stalker or big-game hunter will always try for the best beast, and be proportionately proud of any first-class trophy he may be lucky enough to obtain. Beyond this, the size of the antlers is the test of the stag's health

and vitality, and it must therefore always be of interest to owners and lessees of deer-forests to know from comparative statistics under what conditions, and in what environment, the best deer are found and the best wild heads grown.

I have described the summarised horn measurements as "absolute." By this term is meant those measurements that show the absolute length and beam of horn. The widest inside span and greatest spread of horn are also included, and with advantage, in most of Mr. Rowland Ward's records. For the sake of simplicity, however, I have omitted this comparative test, and also because it is not an absolute test of the size or weight of any head. It is chiefly a test of its appearance and beauty. In other words, it depends mainly on the angle and curve of growth of the horn.

In conclusion, I should wish to emphasise my appreciation of the value of Mr. Rowland Ward's *Records of Big Game*, the statistics of which have been compiled with such thorough up-to-date completeness and accuracy, and alone have enabled me to give the foregoing summary of horn measurements.





CHAPTER VII

REINDEER-STALKING IN NORWAY¹

By ABEL CHAPMAN

SCANDINAVIA possesses, in the Elk and Reindeer, two of the finest game-animals that yet survive in Europe. Though their haunts and habits, and therefore the methods of their pursuit, differ widely, still each is entitled to stand in the front rank among big game. But Norway has another, and hardly inferior advantage—that is, that the vast regions in which the two animals respectively must be sought, are in themselves of surpassing beauty and superlatively wild.

¹ It should be noted that the shooting of wild reindeer has been prohibited in Norway for five years—until 1906.

It is a joy to be there, to encamp amidst such scenes, whether one's tent be pitched among the snowfields and pinnaced rocks of the "high fjeld" or in the deep green glades of the northern forests.

True, as regards numbers, the game of Scandinavia will no longer compare with that of some more distant lands. But quantity is not everything—indeed it is quite a minor point, almost disregarded by the amateur rifleman, whose ideal is ever the single big bull, or stag, or ram, as the case may be. He seeks, in short, the very animal whose death it is in the best interests of the herd to encompass, and has a legitimate pride in two or three such trophies that no hecatomb of small heads and "herd bulls" can evoke. The best Scandinavian heads—such as a reindeer of 50 inches in the horn, or a bull elk with 48-inch span—are truly handsome trophies; smaller, it is true, than their New World congeners (especially moose), yet showing up well in any collection.

It is, moreover, only within quite recent years that the stock of deer in Norway has fallen to its present attenuated levels. Only twenty years ago, it was no uncommon experience to fall in with herds of wild reindeer numbering from fifty to one hundred animals. Two, or even three, such herds might be met with during a single day. I have been assured by hunters whose word I would not doubt, that much greater aggregations have been observed during the period named; but I write only of my own personal knowledge. There is not, in Nature, the slightest reason why these troops of beautiful wild creatures

- should not still be grazing in undiminished numbers on the Norwegian uplands. One small extraneous incident has decimated, almost extirpated, them within a space of half a dozen years. The introduction of cheap military magazine rifles and cordite powder was the death-warrant to the mountain game. No animal-life can withstand that ordeal—that is, without rigorous and effective protection. The teeming herds of South Africa have been mown down by the Mauser; the Mannlicher has done the same for Norway.

Compare the two systems. In former days the Norsk hunter took the hill alone, armed only with his single muzzle-loader. Its extreme effective range was under 100 yards, but 50 suited him better. At such close quarters he made sure of his “meat,” and if, on lucky occasion, he killed two deer with one ball, his utmost ambition was attained. His winter’s store was secured, and he returned to his *sæter* content.

But now the whole land is flooded with cheap German magazine rifles, firing ten to fifteen shots almost as rapidly as trigger can be pulled, and sighted for all distances up to a mile or more (2000 yards). These quick-firing repeaters are sold at fifty shillings apiece or thereby. The hunters, thus armed, proceed to the field in parties of three, four, or five together—sometimes more. There is no question of stalking, since close quarters are abolished. On sighting a herd of deer, the hunters proceed to “half-moon” it, and, when thus perhaps two-thirds

surrounded, fire is opened on the herd and bullet after bullet "pumped into the brown," so long as a single survivor remains on its legs or runs within sight. I have myself frequently counted into the 'teens of shots fired in rapid sequence, and on two occasions over twenty in succession.

Illustrative of this, I quote the following from my diary of the last stalking-season I spent in Norway : "An incident occurred to-day which is typical of up-to-date hunting on these fjelds. This afternoon, while in close touch of a herd of nine deer, suddenly several shots rang out on our right flank—we counted thirteen. Then three men appeared on the sky-line. They had apparently got nothing, for they were moving off down-wind, when we hailed them and told them there was blood among the spoor—we having crossed this on an intervening snowfield. But for this they would have left a wounded beast to go off unfollowed. As it was, they chased him all the afternoon, ruining the ground, so our reward was small. The same morning we had counted eighteen consecutive shots on an adjacent fjeld. It is quite customary now among the natives to hunt in parties, where several 'repeaters' are brought to bear—often with such results as above. Another native hunter (one of those terribly keen hands one meets with in all sports and in all countries) lives and sleeps alone on the fjeld, feeding on raw deer-flesh. He told me he had killed thirty-three deer the previous season, and commenced the present one with a bag of eleven out of one herd. When I visited his den, I counted

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eighteen heads lying scattered around—all poor little things in velvet. As far as one could judge, there were only two shootable beasts among them.”

The same year my friend G. wrote me :—“ The results of these repeating rifles are beginning to show. The big herds of 100 to 200 deer are things of the past, and, for my part, I am inclined to ‘ chuck it ’ altogether. I saw one lot of sixteen deer surrounded by natives and every one of them slaughtered.”

Wild reindeer are found nowhere in Sweden, nor (though they are abundant in Spitzbergen and the Arctic Archipelago) do they exist in the northern half of Norway. Their place is there usurped by the tame herds of the Laplanders. Thus the wild race is confined to the southern half of the country, not extending beyond Sündal.¹

The home of these deer is far above all tree-growth or even brushwood. There is no plant-life bigger than stunted juniper, dwarf-birch, bleaberryling, and heather. In many valleys is abundant pasturage—grass and flowering mosses ; while at the highest elevations grows the pretty “ Rens-blomst ” like a white buttercup, but turning pink in flower and stem ere it matures.

The physical features of the four great fjeld regions of Norway may be described as follows, beginning in the south :—

¹ The distribution of wild reindeer is seen at a glance by referring to one of the bathygraphically coloured maps of Norway, such as Cammermeyer's, where elevations are shown in zones of colour. It is on the highest, or sage-green zone (interspersed with patches of *white*, to represent snowfields and glaciers) that alone these deer are found.

(1) *Ryfylke*, extending from Saetersdalen to the Haukelid fjeld—of moderate elevation, 3000 to 5000 feet, and of generally even contour; but so broken up superficially with rugged gorges, protruding ridges, and corries, as to afford quite the most favourable ground for stalking. Abundant pasturage, but a lighter stock of deer than farther north.

(2) *Hardanger Vidden*.—On these glorious highlands vast stretches of tawny downs alternate with broken rocky country, averaging 5000 feet in height. The great breadth (say 80 miles) is a drawback, since, should the wind hold continuously for a week or two from east or west, the deer are apt to draw away to windward farther than one has time to follow. The lucky hunter encamped on the weather verge has them all on his side.

(3) *Jotunheim*.—This is both the loftiest and most truly alpine region in all Norway, the peaks of Galdhøpiggen, Glitretind, and others, exceeding 8000 feet, and involving hard climbing and some mountaineering knowledge. The upper regions are far more abrupt and craggy than other Norsk fjelds, but the head of deer, in old days, was very great.

(4) *Dovre fjeld*.—Though of only slightly inferior elevation (great part exceeding 7000 feet and Snæhatten nearly reaching 8000 feet), the Dovrefjeld is the exact antithesis of Jotunheim. In place of towering peaks and pinnacles of riven rock piercing the clouds, we have here endless rock-plateaux of level or gently-inclined plane, flat as though rolled out by some giant power, till contorted strata writhe

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and amalgamate under the resistless pressure. Naturally such conditions are adverse to the stalker, and shots are long. Perhaps for that reason Dovre has always held the heaviest stock of deer in all Norway. But it also had more hunters. For, being intersected by upland valleys occupied by *sæters*, every nook and corner of its vast wilds was accessible to and ransacked by the native gunner. Another drawback is that wild-bred ponies roam at elevations of 6000 feet and upwards.

The habits of reindeer, as observed during August and September, are strictly diurnal. The nights at that season are lengthening out; but the deer, it must be remembered, have just enjoyed nigh three months of uninterrupted daylight, and continue to avoid moving about in the cold and darkness of night. Their busiest feeding-times are at dawn, when they graze for some hours; and again, a shorter spell, towards dusk. On the more barren grounds, where scanty moss and lichen alone are found, these deer feed along faster than any other animal I know—one has often to keep running to hold them in sight. They thus cover a great deal of ground. There are fjelds where the hunter would perhaps be as likely to find deer by simply waiting at one spot as by walking on all day. It goes without saying that that spot must be a high point, commanding good views of all the neighbouring valleys and pasturages.

One habit of reindeer is fixed and invariable—the mid-day siesta. Before noon they have ceased to

feed in earnest. For the next hour they stroll listlessly to and fro, passing and repassing—perhaps enjoying a little social intercourse. But at about one o'clock they will all lie down—all save the sentries, who keep watch the whole time. The position chosen is always unstalkable. In fine warm sunny days the top of some detached kopje will be selected. In rough or boisterous weather they seek the shelter of some broken ridge, or lie down on the grassy shelves of a leeward face. On either flank the sentries stand erect, facing down wind. Deer are troubled by no fears of an enemy on the *other* side. Their keen powers of scent assure them on that point. On dead level ground, where they felt absolutely secure, I have seen the sentries also lie down ; but their white necks remained conspicuously erect, while all the rest were recumbent.

Fewer opportunities occur of observing their habits during the closing hours of daylight, for one must then be hurrying campwards ; but I have twice seen the deer drawing together into their sleeping-quarters. On one occasion, just before dusk, we fell in with a herd of a dozen, within a short mile of our tent, and watched them assemble and all lie down for the night in just such a situation as they select for their mid-day rest. Needless to add, I was there with the following dawn.

Such is the reindeer, and such are his haunts. Roaming in full daylight over the glorious wild upland, amidst the grandeur of primæval mountain scenery, it is obvious that he fulfils every aspiration

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AT CLOSE RANGE.

TO VINU
AKHOLIA O



A LITTLE SUSPICIOUS.

• both of the hunter and of the lover of wild nature. It remains to add a few remarks on the methods of his pursuit.

On broken rocky ground there is little "stalking," as that word is popularly understood. It is a matter of holding the fast-feeding herd within sight, with oneself concealed. This often means covering a mile or two at top speed, running below a sheltering ridge, or jumping from rock to rock across chaotic stretches of tumbled boulders. There is little or no crawling, beyond perhaps the final approach. On the open downs or level bedrock it is different. To "get in" on such ground often involves severe labour, perhaps crawling a couple of hundred yards, and that with extreme care, owing to the number of eyes, any one of which may detect a sudden or incautious movement. Not that reindeer (or any other mountain game) are specially endowed with long sight, or depend on their eyes alone to warn them of distant dangers. Their keen powers of scent are their first protection, and their hearing is most acute. But beyond a certain distance (say 500 yards) they are not apt at detecting a slow and cautious movement, though at shorter ranges—150 yards or so—they are marvellously quick of sight, and instantly pick up the slightest sign.

The following is an instance. We had descried nine deer some three miles away. An hour later we followed round the shoulder behind which they had disappeared, and at once descried three ponies, placidly feeding, a mile distant. The deer were about

midway, and had evidently not seen the ponies, for they continued grazing along the slope till directly to leeward of the latter, when the equine scent at once set them off in full flight. We followed some distance, but presently saw that the game was "*meget skraempt*" = thoroughly alarmed. It is obvious that the nine deer were less quick of sight at that distance than two men, since we both had spied the horses directly on coming within view.

The moral is that an experienced stalker may take some slight liberties up to a certain distance. Within that, however, the utmost caution is absolutely essential; and on very open ground it is wiser to take a 200-yard chance rather than risk losing the "quiet shot" altogether.

Scent presents curious problems, and most sportsmen will have experienced the strange tricks it occasionally plays. I will relate two. Of course one sometimes comes on deer undisturbed, although directly to leeward, when in a hollow of some deep ravine; but in those cases it is readily seen that the tainted breeze has been carried high over their heads. The two following cases are less easily explicable. On the first day of the season, when using a "*bind hund*," or leashed hound, similar to the method employed in elk-hunting,¹ this dog, "*Veier*," took a strong scent, which, after leading us a mile or so, turned up a lateral valley at a right angle, and

¹ There is no reason why a hound should not be employed thus to find deer, as he is to find elk; but the system is not customary in Norway. Hence I have not thought it necessary to refer further to it. The system will be fully described when I come to deal with elk-hunting.

Ways of Caribou



REINDEER IN THE EARLY MORNING.

A black and white photograph showing a group of reindeer with large, velvet-covered antlers standing on a dark, rocky shoreline. They are positioned next to a body of water, with a cloudy sky in the background. The photograph is oriented horizontally on the page.

GOING OVER THE BROW.

directly below the wind. This glen, or gully, was a complete *cul-de-sac*. Half-a-mile in depth, it was entirely walled in by mural precipices of 1000 or 1500 feet in height, while the wind blew right up it. "*Veier*" being so keen, we held on, keeping close under the nearer side, till we commanded the whole view. Here we spied every ridge and ledge, each glen or patch of snow. Right at the end, 150 yards beyond us, was a black and dreary tarn, set in stones and fringed with glaciers. After sitting spying for ten minutes, we rose to go, when something caught my eye behind, and in the midst of those grey boulders by the lake-shore, a really fine rein-buck (regardless of scent and all the proprieties) was springing from his couch. So precipitous was the place, that he actually had to turn and come back past us down the glen, picking his way among the boulders. How we ever got so near this animal, direct down wind from us, I have never understood.

The second instance is less specific. Full five miles long, the upland valley of Gjeithaa-dal, with its broad-sloped sides and abundant pasturage, is an ideal resort of deer. Yet the air-currents conspire to defeat every plan of approach. The autumn winds almost invariably blow athwart the vale—from one side or the other, but always across. A herd of deer is spied feeding, well up on the windward slope. The problem seems simple—one of the simplest in our craft. The hunter has only to hold his course up the floor of the valley till straight below the game, whence there is abundant "advantage" (in broken

ground, big rocks, etc.) to cover the ascent, direct up wind. But never does the hunter "get in." Long before he has reached his point, if he has not already felt the traitor breeze on the back of his neck, he sees, to his amazement, the usual unmistakable alarm signals. Feeding or resting is interrupted, all heads are aloft, and ten seconds later the herd is off, helter-skelter over the rocks. The explanation is that, in valleys of a certain configuration, the impact of a strong cross-wind on the leeward crests throws back a reflex current beneath the upper air—this reversed breeze impinging midway up the weather-slope. The deer are thus "between two winds," and can be approached from neither above nor below.

The best time for stalking is in September. It is a mistake to start earlier, for in August all heads are in velvet and no trophy worth having. Rather delay till September, when the heavy old *stor-bocks* are on the move, clean and hard in horn, and worth the hunter's utmost labour to secure. These big ones are rarely seen in August. Besides, in September the fjeld is less apt to swarm with native hunters.

A really big old reindeer bull, with his massive frame and wide-sweeping recurved antlers, is a magnificent example of wild animal life. The handsomest are those of the dark-brown type, which colour sets off the snow-white shaggy neck in strong contrast with the dusky head and dark glossy pelt. Other bulls are of a French grey in general colour. Reindeer, indeed, vary in colour more than most wild animals. In the same herd one sees animals of

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various shades, from deep brown to almost white, and I have shot one which was distinctly piebald.

The wild reindeer are now absolutely protected for five years, and no hunting is allowed till 1906. Certainly this is now the only means left of saving the scant survivors from speedy extermination—and even so only on the assumption that the law is rigorously enforced. In that sense the measure is entirely welcome and commendable. But what a scathing condemnation it is of a weak-kneed legislature that for years sat listless and apathetic, fearing to act till such drastic measures were forced upon them by sheer necessity. There is no excuse of ignorance. The simple fact is that, in the peculiar conditions of Norway, where all hunters have votes (or nearly all voters hunt!), the peasant legislators lacked courage to control the excesses of their constituents. The world all over has made a pretty good muddle of this matter of the protection of wild animals; but this case is, I think, as bad as any—worse perhaps than that barbarous massacre of the bison in America, or the decimation of the South African fauna; since in both those wide regions no law could, in practice, be enforced, which is not the case in Norway.

Annexed are the horn-measurements of my two best Norwegian reindeer :—

	(1) Ryfylke.	(2) Dovrefjeld.
Length along curves	51 inches.	52½ inches.
Widest inside	29 ”	36½ ”
Tip to tip	20 ”	27 ”
Circumference above “brow” . .	5¼ ”	5 ”
Points	25	23

Weight of No. 1 estimated at over 30 stone, clean.

Larger heads than these have been obtained in Norway. The biggest recorded in Mr. Rowland Ward's *Records of Big Game* measures $59\frac{1}{2}$ inches in total length, and there are also entered therein five others which exceed my own heads, as follows—59, 58, $55\frac{1}{2}$, $54\frac{1}{2}$, and 54 inches. Such heads are, of course, exceptional, and any one possessing a horn of 4 feet in length may congratulate himself on having a handsome trophy.

As regards choice of rifle, I have hitherto used the .450 Express for this and all stalking (in Europe). The Express is now, however, out of date, and I would recommend a cordite .303 carbine, or similar type, as a useful weapon. But let the rifle be single-barrel, and single-shot. If permissible to air my own views, a second barrel to a rifle of any description is a useless encumbrance. For military purposes a double rifle is unknown; why should it appear in the sporting field? Presumably because, guns being all double, the idea was to make a rifle that would "come to the eye" like a gun. If that was the argument, it was a false one; since the art of using a rifle is diametrically the reverse of that which applies to guns. In modern gun-shooting the elements are instant decision, no aim, but rapid manual dexterity. With the rifle the essentials are deliberation, calculated judgment, and a mechanically refined aim. No Boer, or other professed hunter the world over, carries a double rifle. Let the young Britisher also discard the burdensome handicap of a second barrel, and he

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will agree that one ball, well placed, is better than two (or more) fired with less deliberation. Let him remember that rifle-shooting is a mechanical art, nor does a rifle ever score by a fluke. If these two facts are borne in mind, they will tend towards success by steadying the nerve, and restraining the tendency (if any) to what is called "buck-fever."





CHAPTER VIII

NORWEGIAN ELK-HUNTING

By ABEL CHAPMAN

THE mighty elk (*Cervus alces*) afforded the ancients, from Julius Cæsar to Pontoppidan, a subject for many curious fables. We know him better now ; yet with his vast sloping form and lengthy limbs, his massive head and neck, surmounted with its many-speared coronet, and terminating in the bulbous prehensile lip, the elk does present, as he moves half seen amid forest shades, a weird, old-world appearance. He is the largest of European big game, old bulls being said to stand 18 hands, and to weigh nearly, if not

quite, 100 stone. The best I have shot, however, fell short of these dimensions, taping near 2 inches less at the shoulder, and scaling about 1250 lbs. dead weight.

Purely a forest animal, the elk, alike in his home, his habits, and economy, is the direct antithesis of the reindeer last described. While the latter loves the mountain plateaux, avoiding even the scrubbiest birchwood, the elk revels in deepest forest, is never seen outside it, and rarely above timber-line. The elk does not graze, as other deer, and as cattle do, but browses on the branches of trees—more after the manner of the giraffe. The great length of his forelegs, and comparatively short neck, make it awkward—if not impossible—for him to graze on level ground, and I have never seen him attempt to do so myself. When the summer vegetation is at its fullest luxuriance, when moist glades and forest verges stand waist-deep with lush grasses and sedge-plants, then the great deer can graze with ease and comfort. He will even sweep in mouthfuls of the feathery fronds of the fern, leaving the naked stalks as evidence of a whole bracken-bed stripped bare.¹

Ferns or grasses, however, are but seasonal and exceptional items in his commissariat. The regular food of the elk consists of the young branches and leaves of deciduous trees, and especially the birch, which is so abundant and characteristic of Scandinavia. The pine-forest is his home, but he will not be found

¹ This is partly caused by the elk cleaning their horns on the fern, but part is also eaten.

among pines alone. It is essential that the conifers be mixed with birch, maple, and other green-leaved trees.

The range of the elk northwards is coterminous with that of the coniferae. It extends farther north than that of the reindeer, but stops short of the Arctic Circle. Thence southward there are strong haunts in Namdalen and in Trondhjem's Amt, and through all the great forest-region that stretches across Norway, and over the Divide into Sweden (Jemtland). From these points southward there is almost unbroken forest in both countries. In Norway it lies along the eastern flank of the great fjeld-ranges, as far as Telemark and nearly touching Christiania, while in Sweden the range is still farther prolonged to the shores of Lake Wenern.

The sporting rights in these great forest areas may be roughly divided into two classes. Large tracts are unappropriated, and therefore belong to the State. The sporting rights on these, being periodically let at auction by the Government, are thus available to the foreigner or other highest bidder. The remainder is private property, and each farm is usually owned by its occupier. By law each of these "matriculated districts" carries the right (transferable) to kill one elk—or, in plain English, "one farm, one elk"; and the farmer is often keen enough to transfer his one-elk right to the wandering Briton.

The rents of State forests run from as little as £10 or £12 upwards, according to situation and the



SWEDISH ELK.
From a Drawing by A. E. Caldwell.

TO VINI
ABROTLA



A DEAD ELK.

number of rights carried, but favoured districts naturally command higher prices.

The plan I found most convenient was to acquire one of the State forests in a good district, when there was no difficulty in securing further "rights" from adjoining owners, many of whom were desirous of exchanging their one-elk right for some forty or fifty kroner in specie,¹ and coming into our camp for the purpose of making a bargain.

Though extensive landowners and comparatively well-to-do, these hardy backwoodsmen are glad to render service as hunters, and generally to assist in camp. And a more simple, kindly, and true-hearted race there cannot be found on earth than these Norsk "bonders," their friendship and fine character being one of the features of forest-life in Norway. Their sequestered homes are freely placed at one's disposal. Though mere log-huts, they are scrupulously clean and comfortable, and contain wondrous store of all necessities, edible and other, such as warm sheepskin rugs, homespuns, embroidered quilts, and similar housewife's gear. These are accumulated in quaintly carved chests, some bearing a date of a century or two back. The kindly women-folk busy themselves the livelong day with ever-rattling looms and dairy-work. Their utensils strike one as antiquated and home-made; but there is often an article right up-to-date that seems incongruous, that is, a "separator," the latest American "notion" for securing all the cream.

¹ A kroner represents a trifle over thirteen pence—eighteen of them going to one pound sterling.

It should here be specifically stated, by way of warning, that the nominal right to kill so many elk is by no means a criterion—far less a guarantee—that that number will or can be killed, or even that a single elk exists on the land in question. Even State forests carrying a nominal right to kill ten or a dozen elk may not hold half or even a tithe of such a stock, and careful judgment must be exercised in renting single-rights, or many a kroner (and, what is perhaps of more importance, many a hard day's work) will be spent in vain.

It is, on occasion, a useful means of testing the real chance on any offered farm to suggest something on these lines—"Well, Ole, you wish to let me your elk-right for forty kroner? But my way of doing this business is a little different. I will come to your farm to-morrow, and if I shoot a bull elk, will give you *sixty* kroner. But remember, if we don't find a bull, then I pay nothing." Should friend Ole accept the proposal (he will probably require some hours, or perhaps all day, to think over all the inwardness of it), then his farm is worth a visit.

The pursuit of the elk, as practised in Scandinavia, is a science in itself—a thing apart in sport. It will be obvious from what I have written that an animal, found only in evergreen forest, where no clear view can be had beyond 100 yards, and often far less, cannot be *stalked*. For "stalking" presupposes that the game be first spied at a distance, which, in this case, is impossible.

The system adopted is *hunting* with a dog—the

elk-hound, a breed peculiar to Scandinavia and resembling what is commonly known as the "Esquimaux." A sturdy, self-reliant beast of uncertain temper, his salient features are the broad head tapering to a sharp muzzle, conical cocked ears, thick-set barrel, and bushy tail curled stiffly backwards over his quarters. He is very hairy, strong, and well set up, full of character, and eminently unsafe with strangers.

In Sweden the elk-hound is employed to range free—sometimes a couple at once ; or, in other cases, is slipped only when the hunter reckons he is well up with his quarry. The hound then runs the elk, mute, till the deer is brought to bay. This may mean either a hot burst of several miles through tangled forest and over the roughest of ground ; or, on the other hand, the elk (provided he has no suspicion that the hound has a human confederate) may despise his canine persecutor and soon come to a stand. A clever dog perfectly understands that it is no part of his business to drive the elk, or to break his bay. On the contrary, he fully realises that his duty lies in holding the game engaged till his master can come up.

Hunting thus with the "loose hound," as it is called, is nominally illegal in Norway, though frequently practised there. It usually, though not always, involves an amount of hard running that some men over forty, or indeed over thirty, scarcely relish or find themselves capable of doing.

The great drawback to the indiscriminate use of a ranging dog is that it is absolutely impossible to be

certain of the *quality* of the animal he is running. Thus, after a heart-breaking burst, the hunter, on coming up, may find at bay a cow elk or a miserable spiky-horned two-year-old bull. The workmanlike method of employing the "loose hound" is to slip the dog only *after finding* and *following* the spoor of a big bull, when the hunter knows the game to be close ahead. Then, should he be in thick forest, where the chance of *seeing* the elk at close quarters, much more of shooting him, may easily be remote, it is quite legitimate and often a successful resource to slip the dog. Personally I found, years ago, that the heavy running was beyond my powers, and have since used exclusively the leashed hound.

In attempting to outline the system of elk-hunting by this method it is first desirable to review the conditions of the problem set before the hunter. The actual home of the elk is the first point. Infinite areas, all clad with pine, yet varying, *inter se*,—some consist of broken, rolling ranges divided by frequent chasms and ravines, never 100 yards on the level or one open vista. Here, one is always "clawing" up or down precipitous gorges, climbing over moss-clad boulders, or hanging on by prickly juniper. Others are of more even contour—saucer-shaped basins or broad straths interspersed with open glades or stretches of tawny bog. These are the two extremes, and the latter for choice. It is impossible to describe all. Suffice it to add that, in themselves, these primeval woodlands, innocent of axe or saw, are ever beauteous and charming to the eye.

Through a verdant canopy overhead, sun-rays glint and play on green carpets of bleaberry ling or the russet fronds of fern. Huge rocks uprear their giant masses, hoary and lichen-clad, from whose summits one's eye roams over league upon league of forest, till, far away in a crystal atmosphere, the tracery of snowy peaks bounds the horizon.

Thick-set spruce and fir alternate with the feathery foliage of birch and willow, maple and rowan (for, as already set forth, it is on the deciduous trees *alone* that the elk subsists); and the autumnal tints on these, contrasting with the sombre pine, form gorgeous colour-displays that charm nor ever fade from memory.

Amid such scenes the elk is at home. At earliest day-dawn he is astir. His couch for the night has been some rush-bed by an open glade—perhaps the bare needle-strewn forest-floor. He selects no special bed. Oft-times his ponderous bulk has crushed down sedge and spongy sphagnum beneath, till the great beast lies in a tepid bath. But now he is astir; as stars pale and grey dawn steals in through the pines he moves off to feed. In a single birch-grove he *may* spend an hour; but such dilatory ways are not his custom, and lucky is the hunter who falls in with him thus. More often the elk pursues an erratic course, pulling down a bough here and there, but covering miles of ground ere, towards noon, and well to leeward, he again lies down for his mid-day rest. Nor is mere feeding his sole concern. Wild as is his environment, untrodden and barely occupied by man, he never, not for a single hour, neglects precaution

or forgets the dangers that lurk in the forest. What wild animal ever does? Naturally, he moves up wind. Otherwise he might walk straight into an ambush. But he knows—instinct warns him—that danger may also threaten from behind. Hence he habitually casts back, circling round towards his own tracks, and *never* lies down except to leeward of where he has been an hour or so before.

The hunter meanwhile, with hound in leash, has struck the spoor. At first it was only the *scent* of the spoor that the keen nose of "Passop" or "Bjorn" had detected; but soon those huge slots, sunk deep in the sphagnum, tell the tale. It is a bull, and a big one—a "*meget stor ox*." The hunter follows. The trail leads safely enough—45 points off the wind. Here the elk has stopped to pull down a maple; there he has rubbed his horns on a young Scotch fir, scarifying the bark for a yard or more. You note, with surprise, that the damage reaches up 8 or 10 feet high; but (with joy) that there is no "velvet" mixed with the scattered chips that lie below—his horns are clean.

Now the spoor turns off the wind; at first only slightly, but a few yards farther it deflects more decidedly, till it passes the point of "full abeam." The elk, remember, is probably a good hour ahead of you. He may, even at this moment, be wheeling round on a course that will soon bring him direct to leeward and half a mile behind you. The hunter knows that, and must instantly decide on a plan, or that elk is "*skræmpt*"—that is, lost.

So far all has been plain sailing. But, right at this point, I pull up sharp. To attempt to describe the process further would be to attempt the impossible. For just here there comes in that which cannot be described, or written, or reduced to hard-and-fast printed words. There comes into play the "hunter's instinct"—that subtle, indefinable thing that has been vaguely formulated as "wood-craft." So infinite are the ever-varying circumstances that nothing can be written, nor any general rule avail. Each such question must be decided by the hunter on the spot—decided purely on the basis of its own particular surroundings; but decided promptly. If I may here assume that I am writing solely for the instruction of younger hunters, I would venture to offer this advice: Have an idea. That is, decide in your own mind (1) what your quarry is then doing, and (2) your best course to counteract him. And, having fixed on a plan, stick to it. Should your diagnosis be incorrect, you lose your elk; but you will, in all probability, have learnt a valuable lesson that may assist in securing the trophy another day.

It may occur to some that elk-hunting, as above described, is rather a blind game; but that is rather because, as just suggested, the cynegetical points cannot be reduced to print. Assuredly elk-hunting is no "blind man's buff." True, both elk and hunter are wandering hither and thither amid viewless forest, perhaps a mile or two apart. Neither can see the other—except at close range—nor can either divine his opponent's actual movements. The elk relies

little upon sight—in thick forest that sense is of lesser value ; but his hearing is acute in the extreme. His ears, backed by the huge concave horns (which act as sounding-boards), are ever deflecting to and fro, alert to pick up the slightest abnormal sound. But it is on his marvellous powers of scent that he chiefly relies. He can pick up the human taint at a mile—under favouring circumstances, at two or even three. Clearly the hunter's first object is to hold his game to windward ; but that the elk is ever manœuvring to prevent. Both are striving for the same object—to get to leeward ; and each relies (in the first instance) on *scent*. It is true "*hunting*," involving constant alertness, frequent changes of plan, and many interesting and exciting episodes.¹

Elk usually have only one calf, which is born in May, and is, at first, of a reddish colour. I have twice seen a cow elk with two calves. The bulls are said to cast their horns in March and April, and are usually clear of the velvet in the early part of September. The rut commences towards the end of that month, when the bulls will be found to be digging their curious pits or salt-licks. They then move great distances, and the hunter must avoid the spoor of a "travelling bull," for he will never see the end thereof.

As regards size of horn, the greatest span (that is, the straight line between widest tips) of any

¹ There are districts where, by reason of the too broken and irregular character of the hills and the complex air-currents running all ways, the hunting is blind work. In these cases too much depends on pure *luck*, which is an unsatisfactory element. In such districts short drives are often available.

European elk, as recorded by Mr. Rowland Ward is $57\frac{3}{4}$ inches. Only two heads, however, exceed 50 inches in span. My own best head measures 46 inches. This elk carried sixteen points; another, with nineteen points, only spans $34\frac{1}{2}$ inches; a third 37 inches, with twenty-two points. In North America the spread of the best moose heads reaches to 5 feet and upwards; while Alaska and the Yukon are credited with such enormous dimensions as 70 inches, and even more.





CHAPTER IX

CHAMOIS

By RANDOLPH LL. HODGSON

CHAMOIS are to be found in most of the higher mountains of Central and Southern Europe. From the Pyrenees to the Caucasus, from the Carpathians to Albania, their range extends. But it is in the Alps that by far the greatest number exist ; and of the 11,000 chamois that are shot annually in that great chain of mountains, over 8000 are killed in Austria. The aristocracy of the dual monarchy have always been celebrated for their love of sport, whilst the democratic spirit of a republic tends rather towards the extermination of wild animals ; therefore it is not surprising that chamois are



THE QUARRY.

TO VINU
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increasing in Austria-Hungary, and diminishing in Switzerland. Several of the Swiss cantons have, however, lately awakened to the fact that the extinction of the animal was purely a matter of time, and have done their best to avert such a catastrophe by passing laws for its protection.

The chamois in size is slightly larger than the roebuck. Both sexes carry horns, but those of the doe are more slender than the buck's, and the pot-hook curve backward is less pronounced. In Count Arco's world-famed collection of horns at Munich there is a pair that tape over 12 inches along the curve, and are over 4 inches in circumference at the base; and there is another pair, equally large, in the possession of the reigning Duke of Saxe-Coburg. These are the largest known heads in existence.

The colour of the chamois varies with the season. In summer they are of a greyish dun; in winter they become almost black, and the hair grows to three times the length of the short summer coat. Along the spinal column of the male there is, in winter, a fringe of long hairs, which stand upright, waving in the breeze. These long hairs, which are glossy black with yellowish-white tips, when bunched together form the much-prized *Gems-Bart*, or beard of the chamois,—worn in the hat on special occasions by the Continental sportsman. The longer the hairs and the whiter the tips, the more valuable is the beard; indeed, £10 is by no means an outside price for a fine trophy.

Albino chamois are not unknown, but are ex-

tremely rare. There is a superstition in Tyrol that the man who kills a white chamois dies within a year. In some parts of Styria and Salzburg a peculiarly dark animal, with hardly any white about the head, is occasionally met with. This is known as the coal chamois, and is much prized as a freak of Nature. In Tyrol I have seen, and shot, "silver" bucks. These are always lighter than the ordinary chamois, and have a peculiar silvery shimmer about their winter coat.

The average weight of a full-grown buck is about 65 lbs. The heaviest buck on record is probably one shot by Count Arpad Teleki, in Transylvania, in August 1891. This weighed 123 lbs., clean.

Chamois are gregarious, and, like all animals which are found in herds, have always a sentinel, when feeding, to watch over their safety. The old bucks, however, prefer a solitary existence during the greater part of the year, and are only to be found with their families during the rutting season. This with the chamois begins in the first or second week of November. At this period a gland at the base of and behind each horn of the male animal swells up and becomes filled with a pasty lymph, which has a particularly strong and disagreeable odour. At other times of the year these glands are quite invisible. The period of gestation is twenty weeks, and the doe produces one—rarely two—kids at a birth.

The sure-footedness of the chamois is its most striking feature. There is perhaps no more wonder-

ful sight in Nature than that of a herd of these animals ascending the steep face of one of the giant Alpine peaks. To the human eye the rock may appear unscaleable, but the chamois leap nimbly from one projecting ledge to another with never a slip or falter. The hind-legs are longer than the fore-legs, so they ascend the rocky cliffs more easily than they descend them. In descending, however, another of Nature's contrivances comes into play. The hind-feet possess false hoofs, which catch in every crack and crevice, and thus act as a kind of brake ; whilst the animal slides forward on the sharp hoofs of its fore-feet, which are set close together, and kept well in advance.

The close season for chamois varies slightly in different places. In some parts of the Alps they may be shot from July to December ; in other districts from August to December. The majority of chamois-drives take place in September, and in these drives enormous bags are sometimes made. To give some idea of the number of chamois in the best shoots, it may be recorded that on August 31, 1892, ninety-four were shot in one drive on Prince Auersperg's famous preserve in the Zillertal ; and the result of six days' driving was a total of 222 to five guns. This was by no means an indiscriminate slaughter, as only bucks and barren does were killed.

In Tyrol, Salzburg, Styria, and Bavaria the best ground is mainly in the hands of the Imperial House, foreign princes, or the Austrian nobility. There are also a certain number of peasant shoots, but in these

the game is usually both scanty and extremely wary from constant harrying. The Tyroler is a born sportsman, and is brought up to the use of the rifle from his earliest childhood; so, though an Englishman may readily obtain permission to try his luck on one of those free shootings, he must consider himself fortunate if his efforts bring him anything beyond a remarkably healthy appetite. Now and again the advertisement of an Austrian mountain-shoot to be let appears in the English papers, and, when one remembers the enormous rent asked for a Scotch deer-forest, it is difficult to understand why British sportsmen are not more eager to accept these offers. It is difficult to give any hard-and-fast rule as to the expense of such a shoot, but so much is certain—that it will not amount to more than a quarter of the cost of a Scotch forest. Keepers' wages are the principal item, and these do not come to more than £50 per annum a man; probably three trustworthy men would be sufficient. Should the ground be leased from the Crown, as is usually the case, the rental is merely a nominal sum, assuming that the shoot has not been preserved before. In this case, however, it is probable that a year or two would have to elapse before any shooting took place.

In Austria the rifle generally used is the .450 Express. In some preserves a single barrel is insisted on—the reason for this being the discouragement of wild shooting at long ranges, and the consequent wounding of animals that are not recovered. The Emperor of Austria, one of the keenest sportsmen

imaginable, never uses anything but a single-barrelled weapon.

The first shot at a chamois should be, in theory at least, the last one also. The .303 I have seen used with deadly effect. Personally, I use a little double-barrelled .360 Express, made by Springer of Vienna, with an expanding bullet. In appearance it is little more than a toy rifle; in practice it is all that could possibly be required. Its exceeding lightness is a most important recommendation, as every ounce of weight tells on one in the course of a long day in the mountains.

The boots worn should be the mountaineering boots of the country, with their row of gigantic flange-nails round the edges of the soles. *Steigeisen*, or crampons, are necessary for ice or long grass, and should have their place in the *Rucksack*. The latter is a bag made of canvas or strong linen, with two leather straps forming loops through which the arms are passed; the weight of the contents is thus distributed between the shoulders and small of the back, and the arms have perfectly free play. The *Bergstock*, or staff, should be of well-seasoned hazel, with an iron point. It should be strong enough to bear one's entire weight, and a foot longer than oneself. A good telescope or pair of field-glasses is a necessity; so is a sling for the rifle.

With regard to clothes, an ordinary thick English shooting-suit of grey or green will answer admirably for chamois-driving. For stalking, there is nothing like the chamois-leather "shorts" of the country,

which leave the knees bare,—woollen knickerbockers will be cut to pieces, on really rough ground, in a day or two. It is advisable, however, to have long stockings that can be turned up over the knees if necessary.

A word or two may be said here with regard to ammunition, etc. The sale of gunpowder in Austria is a Government monopoly, hence any loaded cartridges of foreign make are liable to be stopped on the frontier. English cartridges can now be procured in Vienna ; still it is just as well to make sure one will have cartridges to fit one's rifle by carrying a supply *in one's pockets*. A *Waffen-pass*, which costs 1s. 8d., and should if possible be secured beforehand, will avoid all trouble at the Custom House, as far as rifles are concerned.

I propose now to give a short account of some actual experiences, which will show the reader better than anything else, perhaps, what chamois-shooting is like. Since almost three-quarters of the chamois killed in the Alps are shot during drives, and this form of the sport is the one to which any Englishman fortunate enough to possess Austrian friends is the most likely to be invited, I will first endeavour to describe a chamois-drive. The ground to which I would transport my reader is in the Zillertal—that beautiful valley in Tyrol, which contains some of the best-stocked chamois-preserves in Europe.

On a grassy knoll where three valleys meet, and at the foot of which two rushing, roaring mountain streams merge into one, there stands a wooden

chalet or shooting-box, the only sign of human life in a majestic scene of Nature's own painting. On either side of each valley towering walls of mountain rise in lofty grandeur. The lower slopes are clothed with a billowy mass of dark-green firs, flecked here and there with golden larches. Then the *Larchen*, or dwarf-pine, fights its way upwards for another thousand feet. Above, all vegetation ceases, and the grim, grey granite itself, stained and weather-beaten with the passage of centuries and covered with the eternal snow, rears itself skywards.

We left the hut when the first rays of the sun came glancing over the mountain-tops, warming the bare grey granite with rosy light, and glittering on the distant glaciers with dazzling brilliance. Three hours' stiff climbing brought us to the upper slopes of the mountain, each upward step opening out fresh glories in the way of scenery.

It was early November, for my host was one of the hardier spirits who prefer the risk of snow and extreme cold, together with the certainty of finding the old bucks in their full winter coat and in attendance on the ladies, to a more genial atmosphere, with less chance of meeting with the patriarchs of the mountains. No fall of snow had, however, yet come, and the air, though keen and exhilarating, was tempered by the warm sunshine. Far below in the valley the river, like a silver thread, foamed and tossed along its rocky course, the murmur of the stream still plainly to be heard, though we stood 5000 feet above it.

After a brief rest we started on the last scramble to our posts, a matter of an hour's hard climbing to the highest gun. Settling myself behind a pile of stones on reaching my position, I had still three-quarters of an hour in which to enjoy a frugal lunch and look about me before the signal shot, echoing and thundering from mountain to mountain, would announce the commencement of the drive. Before sitting down I had put on not only my coat and waistcoat, which I had been glad to dispense with during the ascent of the mountain, but also a thick woollen sweater, a muffler, and a *Wetter-mantel*—a rough green frieze cloak, which both keeps one warm and yet leaves one's arms free. The best gloves to wear are felt mountaineering gloves, which are made like a baby's, with no fingers. One can grasp the barrel of one's rifle with such a glove on the left hand, whilst the right glove can be easily slipped off at the moment of firing. I have found, too, that a Japanese hand-warmer is by no means to be despised!

The scene of the day's sport was a vast circular depression or *Kaar*—a natural amphitheatre, as it were,—a wilderness of loose boulders of every conceivable size and shape, surrounded on three sides by towering crags. On the knife-back ridge on my left was the highest post, my own being the lowest, whilst the intervening space was covered by the other three guns. On my right the mountain broke sharply down to the valley, and this possible way of escape for our game was guarded by two *Abwehrer*—men

whose duty it is to turn back any chamois that may attempt to escape in their direction—and strings of *Lappen* (brightly coloured strips of rag tied to a long cord) fixed on sticks pushed into crevices among the stones. The beaters, who had left their hut long before daybreak, so as to make a great detour and drive in a large expanse of mountain, would attempt to force the chamois down the steep face of the mountain opposite to the line of guns, when they might be expected to come to one or other of the five expectant sportsmen.

Already I could see on the opposite slope two or three little bands of chamois, some moving suspiciously about as if conscious that danger was afoot. The signal shot echoed and re-echoed from peak to peak, and dying away with a rumble as of distant thunder, alarmed them thoroughly, and soon each small herd had chosen a line of retreat, stringing along in Indian file in the footsteps of their leader. This is invariably an old doe ; any bucks that there may be with the herd usually bringing up the rear.

To distinguish between bucks and does when the animals are some distance away is by no means easy. Each gun, however, in a drive has usually an attendant allotted to him, who, from long practice, is able to inform the inexperienced sportsman as to the sex of any chamois that may be approaching him. My *Trager*, Seppel Wechselberger by name, was an old friend of mine. Many happy days we have spent on the mountains ; many happy days are, I hope,

still in store for us. In the summer he pursues the varied avocations of tailor, barber, and custodian of the rifles belonging to the rifle-club in his native village of Maÿrhofen. In the autumn he assists at various drives in the neighbourhood, and occasionally undertakes, I believe, a private expedition . . . but that is his own affair !

So clear was the air that, though I was fully a mile away from the mountain-side before me, it was the rattling of the stones which fell from beneath the feet of a band of chamois that first drew my attention to them. One by one they came over the crest of the opposite peak, until I had counted twenty-five little black dots that were making their way across the steep face of the crag. Now they would stop for some seconds to examine the ground ; now I could hardly follow their rapid movements with the glasses. One or two other smaller bands had also made their appearance, and were slowly and by degrees, but none the less surely, drawing nearer to one or other of the guns.

A little company of five were filing along what was evidently a narrow ledge high up on the ridge to my left. To the naked eye they were almost invisible except when moving, but with my powerful glasses I could even make out that the leading pair were a doe and kid. Gradually they drew nearer to the spot where the highest gun sat concealed. Suddenly a puff of white smoke shot out from the cliff, and the last black spot was falling down . . . down the steep slope. Almost before the report of

the rifle had reached me another chamois had gone to join his fellow.

But it was time for me to give my attention to something nearer at hand. A solitary chamois, with many a lengthened pause, was slowly picking its way towards the spot where we sat motionless. The size of the beast, together with the length and blackness of his winter coat, led me to believe that I had before me one of the patriarchs of the mountains, and my glasses showed me I was not mistaken. Now he would be invisible for seconds together; now he would be standing like a sentinel on some commanding rock or stone. A dip in the ground once crossed, he would be within shot, and I disposed my rifle so as to cover the spot where I expected him to appear.

One minute . . . two minutes passed, and then the white face rose above a gigantic boulder of rock. Wechselberger's vice-like grip closed on my ankle—"Shoot!" he whispered.

But I waited. A chamois is a small enough mark at 150 yards, and when it is only the head and neck that are visible . . . it is better to wait.

Slowly the buck moved forward. Something away on our left had attracted his attention, and he turned and stood before me—broadside on—a picture of immovable yet intense alertness.

There was no reason why I should miss him. The rocks behind which I was sitting afforded a convenient rest for my elbow, and I had time to take pains over the shot. He gave one convulsive leap, and fell dead.

A doe and her kid were the next chamois that passed us—so close that I could almost have touched them with my alpenstock. The kid was going easily and comfortably within itself, but the open mouth and laboured breathing of the mother-animal showed that they had travelled fast and far. Of course I allowed them to continue their course unmolested, for bucks and barren does are the only animals at which one shoots.

Soon after I had another chance. A buck, which had been fired at from one of the upper stands and missed, came down the line like a bounding cricket-ball. One hardly realises the speed of a chamois until one has seen a thoroughly frightened animal. He was far out of shot when he passed my post in his downward flight, but a blank charge fired almost in his face by an *Abwehrer*, and the fluttering of the *Lappen*, turned him up the hill again. It is by no means easy to hit a chamois galloping over rocks and stones, and though the buck was but some fifty yards away, my first bullet was placed too far forward, and the second missed him completely. Reloading, I waited for another opportunity. Having put some 250 yards between himself and me, he stopped. He was end on, and turned away from me, but by great good fortune my bullet drilled him through and through, and he came down all of a heap.

The drive was now nearing its end. One by one the beaters appeared on the summit of the ridge before us, standing out like silhouettes against the blue sky; and at length they began the precipitous

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TYROL.—START FROM THE CHÂLET

70 vial
ANBOLUAO

descent. When one looks at those frowning walls of mountain, it appears impossible for any human being to find a foothold there. But those natives of the country think nothing of precipices. Now edging along a narrow shelf of rock—now jumping ten or twelve feet on to a projecting ledge—now following the dry bed of a water-course, slipping and sliding amid a shower of falling stones—they come skipping down with as much unconcern as if they were on level ground.

Nine chamois formed the *Strecke* that evening—the *Strecke* being the day's bag arranged neatly on the ground in rows. Of these, six were bucks, two barren does, and the ninth an unfortunate kid, which, unknown to my host, was standing exactly behind a buck at which he fired. But it was exceedingly good eating, which is more than one can say for an adult animal!

It goes without saying that stalking chamois is very much harder work than having them driven to one. To the keen sportsman there is, however, no comparison between the two forms of sport: in stalking, one's knowledge, judgment, and endurance are pitted against the instincts of what is, perhaps, the wariest game that exists; whilst in driving it is, in a sense, only a matter of sitting still and shooting straight.

During the summer and early autumn—when the chamois-shooting season opens—the old bucks lead a solitary and lazy life just below timber-line. At daybreak they are out feeding, but as soon as

the sun becomes hot they retire to thick covert, where they rest in the cool shade until twilight falls. Just at mid-day they rise from their beds, take a few bites of grass, and then lie down again. From this it will be seen that the worst hours for spying chamois are in the morning, from nine to twelve, and that he who would circumvent one of these wily old stagers must be on the mountains at dawn. Being early on the ground also gives the stalker the advantage of the two winds—the downward current which is usually blowing before the sun is up, and the upward one which sets in when his rays strike the slope.

The does and smaller fry, on the other hand, are to be found, as a rule, during the hotter months, on the upper slopes and barren summits. On such ground they are difficult to approach, as their surroundings offer little cover to the stalker.

Were it not for the vicissitudes of the weather, the rutting-season would be the best time for stalking. As it has been already said, the old bucks then leave their lonely quarters to seek the society of the females; whilst the second November snowfall is usually heavy enough to drive the chamois down towards the valleys. Whirling storms and fierce winds are, however, often in evidence, and these not only make stalking unpleasant and difficult, but frequently render it altogether impossible.

No two stalks are exactly alike,—each possesses its own features of interest,—but in these pages, perhaps, one may stand as typical of all.

I had had a long and unsuccessful day. Up and out before daybreak, my rifle was still clean ; for, though I had seen chamois, I had, for one reason or another, not been able to approach within shot of them. The November afternoon was drawing to a close, and the sun had already sunk behind a lofty ridge, which stood out cold and white against the golden west. On the opposite side of the valley the mountains lay bathed in rosy light. Halting on a rocky plateau, that stood out among the pines, I surveyed the scene.

Some hundreds of feet below me a mountain stream foamed along its rocky bed. Beyond this rose "the Gaul"—a grim old giant, whose rugged slopes were, I knew well, a favourite resort of chamois. But, though I searched the whole mountain-side, I could see nothing save a doe and kid.

I was in the act of closing my glasses when my eye caught sight of a black object on what, I felt sure, had been but a moment before a spotless snow-patch. The briefest examination showed me that it was not only a chamois, but *ein capitaler Bock*—one worthy of any effort to secure him. He was standing on the edge of a gully ; and it seemed to me that by ascending the mountain, which was thickly covered with fir-trees, on the opposite side of this gully, I might get a shot at him across the *Klamm*. A dead pine, which stood towering above its neighbours, afforded me a landmark for which to steer. As the rutting-season had already begun,

and the buck was, as far as I could see, alone, I imagined him to be a *Sucher*, or searcher after does; in which case it was highly probable that he would have wandered away long before I could reach my goal. That, however, in every stalk is always a likely contingency: the only way in which I could combat it was to gain the spot I desired to reach as speedily as possible. The failing light was another reason for making all the haste I could.

After a last look at the buck, and, choosing a moment when his head was turned away—for the sight of a chamois is almost as phenomenal as its power of scent,—I withdrew into the shelter of the pine-woods. A few minutes later I stood in the valley on the brink of the roaring torrent. There was no time to seek for a crossing, so I plunged into the stream and waded through. Oh! the cold of that blue-green water! I was wet to the waist when I reached the farther bank, and the freezing atmosphere rapidly covered my soaking garments with a coating of ice. The firs on the Gaul, too, were thicker than I thought, and frequently I had to force my way through the overhanging branches—every bough and twig shedding its burden of snow upon me as I ploughed along.

Half-an-hour later I lay panting within a hundred yards of the dead fir. After recovering my breath, and wiping the snow and ice from my rifle, I slipped the cartridges into the latter and started on the last and most critical portion of the stalk. One stone displaced and falling, one clink of the alpenstock

against a rock, and the chamois would be far away when I reached the edge of the gully. If he had not already gone! It was a big "if"!

For the last fifty yards I discarded the *Bergstock* and crept forward on my hands and knees.

Daylight had waned to twilight; on one lofty peak only the rosy glow still lingered, and the valley below lay hidden in a veil of soft blue mist. But I had reached the brink of the *Klamm* now, had cocked my rifle, and was rising to a kneeling position behind a great stone.

"Phew!"

So he was still there, and he had heard me: I could see him—a dark blur against the snow. There was a second blur, too: his love had kept him chained to the spot—had surely proved his undoing if I could only see to shoot.

A second whistle—there was no time to lose. Another second and he would be off!

I could barely see my foresight against the white background—against his shoulder I could not have seen it—so I took a full sight, and aimed below him. Elsewhere it has been advocated that a rifle should be sighted for this aim; that is to say, to throw up six inches, so that the aim can always be taken beneath the beast's body with a certainty that the bullet will rise to the height of the heart. This applies, however, only to the case of the red deer, or to an animal of almost identical size, and only to the broadside shot. Most shooters will greatly prefer that the rifle should be sighted exactly.

The rifle cracked—it was so dark that the spurt of flame was plainly visible—the report went echoing away into the silence of the night.

One chamois had melted into the gloom. The second remained, but he lay still.



PART III
AMERICAN BIG GAME

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TO VIEW
ANTHROPO



MR. REED'S BIG MOOSE HEAD



CHAPTER X

MOOSE (*CERVUS ALCES*)

By CLIVE PHILLIPPS-WOLLEY

ONE of the first lessons for a sportsman to learn on coming to America is that things are not always what they are called. A "partridge" is a willow grouse, an "elk" is a wapiti, and a "moose" is an elk. But it will do you no good to insist upon these things. This is the American continent, and if Americans cannot call their own beasts what they like, this would cease to be a free country. There is an "Order of Elks," the members of which, I believe, all wear wapiti's teeth on their watch chains, which in itself should prove to any except a bigoted Briton that wapiti are elks. However, from the naturalist's

standpoint, the moose of Canada and America is so nearly identical with the elk of Norway, Sweden, Finland, and Russia, that both alike are known to science as *Cervus alces*.

In a comparatively modern, although prehistoric period of the earth's history, there were in Europe, in Ireland, for instance, and even on the little Isle of Man, deer bigger even than the moose of Alaska.

Great as the Norwegian beast is, he is yet not the peer of the moose either in weight (I believe) or in horn measurement. Certainly no Norwegian heads are known which even approach the largest Alaskan heads in size.

If you refer again to Mr. Ward's useful book, you will find the largest Norwegian elk head recorded therein (1892 edition) measures only $49\frac{7}{8}$ inches at its greatest width, while Mr. Abel Chapman, in his *Wild Norway*, sets down the weight of the largest elk he ever killed at 1260 lbs. *live weight*, this being a beast which carried a head of fifteen points, having a span of 46 inches, or within 4 inches of the record Norwegian head.

Contrast with these figures the American records in "horn measurements" and the span of the record head quoted in the Badminton volumes, and it will be found that even in 1894 the record American head was nearly a foot and a half greater in span than the record European head, but that is ancient history.

Since 1894 all records have been beaten by the gigantic heads obtained in Cassiar, Cook's Inlet, and the Dawson country. In a single hunting trip Mr.

A. S. Reed secured six heads which spanned respectively 65, 66, 67, 72, and 76 inches; whilst on an earlier trip in a different country (Cassiar, British Columbia) he shot a beast whose head measured 36 inches *inside* measurement.

I give here such measurements as Mr. Reed took of this beast at the time as illustrating the proportions of a really great northern moose. I quote without alteration from his note-book.

MEASUREMENTS OF MOOSE KILLED 9TH SEPTEMBER

	Ft.	In.
Tip of nose to root of tail	9	0
Girth	7	10
Leg, elbow to heel	3	5½
Forearm (circumference)	1	10
Thigh (circumference)	2	0
Round belly	8	8
Length of Head	2	3
Withers to heel	6	9½

Horns

Round back and across head	6	10
Span	3	0
Round butt	0	7
Width of palmation	1	3

Points 16 and 17 respectively.

Estimated weight 1000 to 1200 lbs.

The six "heads" killed by Mr. Reed in Cook's Inlet represent, I fancy, the most successful moose hunt ever made by a white man, and if you add to these six monsters nine bears, the largest of which measured over 10 feet in length, five cariboo, some white sheep (*O. dalli*), and walrus, it will be admitted,

possibly, that no finer trophies of a single hunt have ever been brought out of the north.

Both the bears and the cariboo were honoured with new scientific names, and no heads were shot which were not exceptional. To parallel Mr. Reed's success we must go back, at least, to Mr. H. G. Littledale's phenomenal harvest of *Ovis poli* in 1888.

It is difficult to obtain such accurate records of the weight of big game as are supplied by Mr. Abel Chapman, but if good food and plenty of it result in big horns, it should result also in heavy beasts, although I am quite aware that not all heavy beasts carry fine heads.

Still, I think it fair to assume a difference between the weight of the Alaskan and Norwegian moose in some degree proportionate to the difference in their horn measurements. In corroboration of this view, I give for what it is worth, the statement of a Swedish hunter named Nelson, who, having no reason to exaggerate, and being absolutely truthful in all such statements as I could test, told me that in the early days of the "Klondyke rush" he and his partner made \$4000 apiece net by one winter's hunting, and that the best moose killed by them weighed 1980 lbs.

It is almost impossible to obtain accurate weights and measurements of great game, therefore it should be of interest to sportsmen to have the following statistics from the notebook of Mr. D. T. Hanbury (author of *Sport and Travel in the North Land of Canada*), an authority to whose careful accuracy it is unnecessary to call attention.



TWO YOUNG MOOSE.

TO THE
LIBRARY OF
CONGRESS

The bull was killed near Kussiloff Lake, in the Kenai peninsula in Alaska, on September 14, 1903.

From heel to hump it stood . . . 7 feet 2 inches
 From nose to tail it measured . . . 11 feet 0 inches

Mr. Hanbury remarks on this: "About the height I am not very certain. The beast had stiffened during the night, and a very accurate measurement was not possible. The above is not very far out anyway."

WEIGHTS

	lbs.
Hide, paunch, entrails, lungs, heart, liver, and blood	275
Rump and part of back	180
Neck and forepart of back	215
One forequarter without hoof	115
One forequarter without hoof	112
One hindquarter without hoof	135
One hindquarter without hoof	134
One side of ribs	50
One side of ribs	55
Brisket	50
Kidneys and fat	30
Scalp, fat, forefeet, testicles, and extras	110
Head and horns	115

Grand total 1576

Or, as a butcher would "dress" a steer . . . 1047 lbs.

Or, "clean," as in Scotland . . . 96 stone 7 lbs.

To this Mr. Hanbury adds :—

The horns measured exactly 72 inches at their greatest expanse. No allowance was made for lost blood, most of which I collected and weighed when coagulated. Neither

was anything allowed for the animal having remained out all night, for it had rained heavily the night throughout, and, with the exception of having removed the inside, the beast had not been touched. This bull was a gigantic moose, the largest that any of my Indians had ever seen. He was in perfect condition and rolling fat. That he had only just commenced to bull was proved by the colour of the fat, which was pure white.

This man gave me at the same time measurements of moose horns and bear hides, which then seemed impossible, but Mr. Reed has since then brought in from Nelson's hunting grounds hides and horns which substantiate the Swede's statements. Is it not fair to assume that he was as accurate in weighing as he was in measuring?

The range of the moose is, roughly, from Maine to Dawson, and used to extend from the Ohio river to the Mackenzie. I have no means of ascertaining how far south the moose may be found to-day, but he is still found, I believe, in Montana, and almost as far north as this continent extends.

Along that great line of lakes which stretches across Canada, the moose wanders and will wander until man has cleared the hemlock and spruce, and made paper pulp of the cotton-woods and willows; and as he does not, like the buffalo, occupy lands which the cattlemen want for their stock or the farmers for their grain—as he lives where the prospector cannot see to prospect for the willow bush which is over all, and as he is too alert and shy for every hungry fool to kill, it will be long before the

moose is extinct in Canada. Indeed, with such friends at court as that thorough sportsman the President of the United States and Mr. Hornaday, director of the New York Zoological Park, it would not be at all surprising if the numbers of this great beast were to increase in North America. Thanks to the efforts of the two game-preservers I have mentioned, and the efforts of other individuals and clubs in the States, the law with regard to the preservation of the moose is a pretty effective one.

The law is much the same in British Columbia, the main difference between the American game laws and ours being that the Americans make their laws to be enforced, we make ours to be broken and laughed at. The truth is that the game laws of the States are about as good as they could be in a new country. Briefly, they may be summed up for all game, fowl, fish, etc., thus : "Thou shalt not sell game." If that law was enforced in new countries like Canada, it would leave the game for the young men, whose property it should be, at the expense of a few great-bellied gourmands. The moose, of course, is a browsing, not a grazing animal, its principal food consisting of willows, birch, young cotton-wood, mountain ash, swamp maple, and similar shrubs, but he undoubtedly varies his diet with ferns, grasses, mosses, lily pods (of which he is particularly fond), and other herbaceous plants.

This statement of mine, made in the Badminton volumes in 1894, was the only one in those volumes which was seriously challenged by any sportsman of

note. It was not made without a very careful examination of evidence, and subsequent investigation has confirmed me in my views. The evidence is indeed overwhelming in my favour. I wrote then only of the beast I knew, but I see that Mr. Abel Chapman, in his *Wild Norway*, supports me with evidence as to the elk of Norway, whose habits in all else so closely correspond to those of his cousin the moose.

The rut of the moose may vary a little in different sections of the country, but in Ontario he ruts in September, and in the Far North-West he ruts in the first fortnight of that month, at which time his horns are clean and hard.

Apropos of the rut, I have learned on good authority since I wrote the Badminton article, that the Indians of Atlin, and other districts of Northern British Columbia, "call" moose as they "call" them in the Eastern province, but for the most part moose are killed in the north by still hunting, or by running them down on snow-shoes in deep snow.

The moose is an odd mixture of preternatural cunning and either daring or stupidity. He does not clear out of a country as some game would because men appear in it in numbers. I killed my first beasts in a district full of logging shanties and hauling roads, but to kill a moose requires as much skill as any hunter is possessed of. He harbours in thick bush, in which the most silent-footed man must make some noise, and yet in spite of his vast bulk he moves noiselessly even there when it pleases him.



MOOSE FROM YUKON DISTRICT.
Owned by Sir Edmund Loder, Bart.

TO VINU
ABROOLAO



MOOSE HEAD.

His colouring blends with the colour of the shadowy places through which he moves, his scent is of the keenest, his hearing matches his sense of smell, and he is credited with cunning almost diabolical, in the way in which he will confuse his trail and turn on his tracks so as to compel those who follow either to give him their wind or to pass in sight of him.

And yet how often have prospectors and hunters seen him come down to the lake at which they were camped, causing a stampede for rifles when breakfast or the evening meal was being prepared ?

At one time a cracking twig or the faintest whiff of humanity will set the great beast travelling for a day. At another time he will turn his head and stare stupidly at a canoe coming down stream until something hits him behind the shoulder, or will stroll past a camp as if a fire had no connection with the man who carries the gun.

You cannot lay down laws for wild animals except this, that if you want a beast very badly, you will find it almost impossible to get him, and if you don't want one it will blunder on top of you.

I know a man who called a moose to within a few paces of him and took several photographs of him in the open, before he scared away a "head" which most of my readers would travel a thousand miles to secure. And he called this moose by merely grunting like the bull with such apparatus only as he was born with. This was in Canada, but Canada is not the true home of the giant.

Turn up under the mountains of the Kenai penin-

sula which run in an unbroken cordon for 150 miles ; pass in between the headlands of Cape Elizabeth and Cape Douglas ; pass the barrier of the Barren Islands where tides rip, boil, and roar ; sail past the tundra-like strip of land at the mountains' feet, through which birch-fringed sluggish streams crawl to the sea, until as the inlet contracts the tides increase in velocity, and " attain a speed of eight and nine knots an hour, and raise a ' bore ' like an express train for rapidity."

Here where Nature is at its wildest, the waters at their worst, where avalanches on one side and the bore on the other play at making and unmaking the country daily, where live volcanoes contrast grimly with eternal snow and ice, you may find, in a world still in the making, the few giants in the animal kingdom still left on earth ; but unless you go there, you are not likely to see, as Mr. Reed did, ninety of these grand beasts in a single fall, or get a head that spans 76 inches.





CHAPTER XI

THE WAPITI DEER OF NORTH AMERICA

By SIR HENRY SETON-KARR, C.M.G., M.P.

THE wapiti or round-horned elk of the North American continent, although not the largest, is doubtless the finest deer in the world. Imagine Landseer's "Monarch of the Glen" magnified to about thrice its size, with horns sixty inches long, the three or more top points on each side of his twelve to eighteen-point head growing, not as a crown, but in a plane, the lowest tine of the three (or more) being the longest and heaviest of all—and there we have the "Monarch of the Divide," the king of all the red deer tribe, a creature of strength,

grace, and beauty. The wapiti deer may be said to be—with the exception, perhaps, of the bison, now, alas! practically extinct, and apart from the giant moose of Alaska—the chief representative big-game animal of North America.

Nature intended the wapiti for a wide and extended range, but like the bison this natural range and habitat has been sadly decreased by the ruthless death-dealing civilisation of the white man. Originally the wapiti ranged in large bands through the greater part of the continent, from the Pacific coast eastward to the Alleghanies and on to the Adirondacks; through Pennsylvania into Western New Jersey; south again to Virginia and the Carolinas; and in Mexico and parts of California. It was hunted by original settlers in Tennessee, Kentucky, Ohio, and Indiana. Northward, again, its range extended from the Great Lakes through Canada to Vancouver; and there are some wapiti still to be found on the north end of the island of Vancouver, and in the Olympian mountains south of Cape Flattery on the edge of the Pacific. At the end of the seventeenth century Daniel Boone and David Crockett hunted wapiti in Eastern States, where now the largest game is probably a fox or a chipmunk. As the tide of hunters, trappers, and settlers flowed ever westward, the wapiti, eagerly followed and shot for its size and venison, has gradually but surely been driven into narrower confines and to a more restricted range. President Roosevelt tells us that the last wapiti was killed in Pennsylvania in 1869. It existed somewhat longer in Northern

Boy of California



ELK.

70 VINU
A. 1907.13 C.



DEAD ELK—ROCKY MOUNTAINS,

Wisconsin, Northern Michigan, and Minnesota ; and in the 'seventies a few might still have been found in Dakota. There are still a few wapiti left in Manitoba. West of the Missouri river thousands of wapiti were to be found in the early 'seventies all through the rolling plains of Kansas and Nebraska, Wyoming and Montana, and in the foot-hills of the great Rocky Mountain ranges which form the backbone or Great Divide of the New World. But it was almost as rapidly exterminated or driven out of the more open prairie country of this region as the bison or American buffalo. By the 'eighties the wapiti had practically ceased to be a plains animal, and was principally confined to the Rocky Mountains proper—in Wyoming, Colorado, Idaho, and Western Montana.

At the present moment the wapiti has almost ceased to exist in Colorado, where the few remaining individuals are protected, almost too late, by stringent game laws. There are a few still left in Western Montana, and northwards in the wild country of the Canadian Rockies. The Yellowstone National Park in North-Western Wyoming is now practically its sole sanctuary and remaining effectual safeguard against total destruction. Thanks to this Park, whose sanctity is absolute and effectually enforced by means of a U.S. Army Officer, and two troops of regular cavalry, who patrol it regularly, aided by scouts, there is a fair probability of the wapiti being preserved, in this district at all events, in reasonable numbers for all time. A friend of the writer's, who has a hunting camp at the head of Green River,

states that in his opinion there is a stock of something like fifty thousand wapiti still left in and around the National Park. The area of the Park is about 70 miles by 80, and its chief defect, a want of winter range, has to some extent been remedied, quite recently, by the formation of a Government Forest Reserve adjoining the Park on the east and south, and nearly twice its area. This Reserve is intended for a winter range for wapiti, deer, and antelope. Hunting is allowed within it in proper season and within reasonable specified limits as to number of game permitted to be killed per rifle. U.S. Forest Rangers have been appointed to enforce due observance of the game laws, and it is a significant comment on the present trend of western public opinion that the authority of these Forest Rangers and of the Wyoming Game Wardens generally is now fairly well recognised. Not many years since the life of a Wyoming Game Warden was not an altogether happy one. When first appointed, if zealous in his duties, an insurance on his life would not have been accepted by any business office that understood the situation.

In the Park proper no hunting at all is allowed under any circumstances whatever, but fishing is allowed in certain streams under proper rules. A U.S. Commissioner is stationed in the Park, and all violators of the Rules and Regulations are brought before him for trial and sentence. The penalties are fine and imprisonment, or both, up to five thousand dollars and two years, under the

jurisdiction of the U.S. Courts and not of the local State Courts.

It will thus be seen that Uncle Sam is now exceedingly practical and effective in his big-game preservation in this district. He has learnt a lesson from the extermination of the bison, and is alive to the necessities of the situation so far as the remaining species of big game are concerned. It must also be satisfactory to all sportsmen and naturalists to know that President Roosevelt, a sportsman before he was a President, is thoroughly in earnest about the preservation of the big game of his country. The establishment of the additional Reserve already mentioned was probably largely due to his influence.

The general result is that wapiti, deer, and antelope swarm in the Park and overflow into the adjoining districts. Grizzlies and black bear romp gaily round passing visitors and Park travellers, and have even been known to enter camps at night and help themselves to groceries from the waggon tail-board.

To return to earlier times, I well remember arriving at Fort Steele, in Wyoming, in August 1877, accompanied by a congenial friend, Thomas Bate of Kelsterston, N. Wales, intent on our first hunt in the Rockies. Wyoming at that time was an ideal hunting ground. The Main Divide runs through it for over three hundred miles. From July to November the climate is magnificent; and twenty years ago the rolling prairies, the pine-clad slopes, quaking 'asp and cotton-wood

groves, the rocky peaks and precipitous cañons of this western land were the natural home of antelope and deer, *Ovis montana* or big-horn sheep and grizzly, the shaggy buffalo, an occasional puma or mountain lion, and the lordly wapiti. Fort Steele, our starting-point and base of operations, was then a military post on the Union Pacific Railway, where it crosses the North Plate river at an altitude of 6000 feet above the sea. The country at this point is singularly uninteresting. With the exception of a few cotton-wood trees along the river there is no timber and little green grass. Rocky ridges and rolling plains covered with sage brush and brown bunch grass and well stocked with cotton-tail rabbits, badgers, prairie dogs, and rattlesnakes, as well as in those days with the prong-horn antelope, comprised its scenery and its wild animal life. Only in the dim distance could be seen the high peaks of the Main Divide. Some fifty miles of upland prairie and foothill had to be traversed before the nearest point of our then happy hunting ground could be reached.

On that first hunting trip—through which we carried our tents, stores, and impedimenta in a commissariat waggon, had an ample supply of good hunting ponies, and were accompanied by two hunters and an engaging western youth who drove the waggon and did what he was pleased to call the cooking—we revelled for some months in an outdoor life of pure and unaltered bliss. A perfect climate, freedom from letters, telegrams, and civilisation,

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congenial companionship and abundance of game were enough at four-and-twenty to leave nothing to be desired. And we saw enough wapiti, and secured a sufficient number of good heads to satisfy our most sanguine anticipations.

Since then I have paid many visits, at intervals, to this western land, and enjoyed many subsequent hunting trips. On each succeeding occasion the game were less numerous and more inaccessible, until in 1898 good hunting could only be obtained in the roughest and wildest and most densely wooded mountains south and west of the National Park, where, as already stated, a fair stock of wapiti, deer, antelope, and some bear and big-horn sheep are yet to be found.

“What does a wapiti stag weigh?” I have occasionally been asked. A fully matured wapiti stag will turn the scale at from 60 to 75 stone, say up to 1000 lbs. clean weight. That is mainly an estimate. There are no scales in a western hunting camp. But I feel fairly confident that this estimate is correct. I have shot many an old bull that taxed the efforts of two able-bodied men to the utmost to turn over as he lay dead on the ground. Ranchmen accustomed to assessing the weights of live cattle can always make a shrewd and correct guess at weights of game, and the above figures are their estimate. An orthodox mature wapiti stag usually carries a twelve-point head, the exact replica on a much larger scale of a good red deer head, with this exception, that the three or more topmost tines are always in the

same plane, and not in the form of a crown. The lowest of these three or more topmost tines is always, in a good wapiti head, by far the longest and heaviest of all the tines on each horn. Heads carrying fourteen, fifteen, or sixteen points are not uncommon, and eighteen-pointers have occasionally been killed. But twelve-tined heads prevail, and in this respect wapiti are far more regular in the number of points than red deer. Occasionally wapiti heads throw out extra tines growing backwards from the horn, an eccentricity hardly ever seen in red deer heads. I have shot several with this peculiarity. A good head will measure up to sixty inches, and even more, along the curve of horn from burr to tip; and the beam or girth, taken at the point of smallest circumference between bay and tray, will vary in a good head from 7 to 9 inches.

The following are the dimensions of a wapiti stag that I shot in Southern Wyoming in 1883. He was a twelve-point stag of ordinary size, and I measured him as he lay dead on the ground :—

Height at shoulder . . .	5 feet 4 inches.
Girth behind shoulder . . .	6 feet 2 inches.
Length of horn along curve . . .	56 inches.

The following are the horn measurements of the best wapiti I have ever killed :—

Length along curve . . .	61 inches.
Beam between bay and tray . . .	8 inches.
Span	52 inches.
Points	Twelve.



A WAPITI HEAD.



A 13-POINTER.

TO VIND
ABORIGINAL



A KILL.

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This bull was shot in Wyoming in 1883. I have shot heavier heads, and heads with more points, but none that combined so good a length, beam, and span. Occasionally wapiti horns palmate. This usually occurs in the topmost points. I have never been lucky enough to obtain a genuine palmated wapiti head myself, but have seen two fine specimens shot on the Main Divide by friends of mine. One was shot by Mr. Oliver Jones of Larkhill in 1877; the other by Mr. Stirling in 1887, and both bulls were shot in the same district, at the head of Snake river on the northern border of Colorado. I measured Mr. Stirling's head. The palmated horn between the top points was over eleven inches in breadth.

A splendid collection of about fifty wapiti heads, shot mainly by British sportsmen, was shown among the "hunting trophies" of the American Exhibition at Earl's Court in 1887. It is doubtful if such a fine collection will ever be brought together again. The best head of this collection, shown by Mr. Frank Cooper, was a sixteen-pointer measuring $62\frac{1}{2}$ inches in length along the curve of the horn, 8 inches in circumference between bay and tray, and $48\frac{1}{2}$ inches widest span. Some other heads of this collection approached it very nearly. These measurements were taken by a committee of British big-game hunters organised by Mr. E. N. Buxton, of which I was a member, and they may be relied upon as correct.

A thoroughly up-to-date and well-illustrated record of horn measurement of wapiti, as well as

other great game of the world, will be found in Mr. Rowland Ward's *Records of Big Game*, now in its fourth edition. It is the best work of its kind extant, carefully compiled and well authenticated, and amply repays perusal by sportsmen and naturalists interested in this branch of the subject. In this book the horn-measurements of some seventy-six wapiti are recorded, ranging from nineteen points, and 70 inches in length along curve of horn, downwards. The 70-inch head is from the Olympic mountains in Washington State, and the large majority of the best heads from the State of Wyoming.

I suppose that nothing in the way of rapid conversion of vegetable into animal matter is more remarkable and extraordinary than the growth of deciduous deer-horns. Wapiti, like red deer, shed their horns probably some time in March (the exact month is, according to some authorities, a disputed point), and commence to grow them again almost immediately. By the middle of August the horns are full grown.

My last hunting expedition to the Rockies was in 1898, when I managed to secure nine very fair bulls, including a 14-pointer considerably above the average. The following account of how I got this bull may serve to illustrate the more careful methods of still-hunting now necessary when after wapiti in the Rockies as compared with the happy-go-lucky hunting of twenty years ago when game was plentiful and found in more open country. We were camped in the heart of the rough mountain ranges on the

Idaho border. One day Bob Snell, my hunter, and I were bent on exploring a certain hill where, the day before, a particularly hoarse note had betokened the presence of an old bull. Presently we came to some very fresh tracks of a herd of elk. "I think we'll leave our horses, Bob," said I. Bob agreed. We advanced cautiously on foot, and soon came in sight of some cow elk feeding. A patient examination of the thick forest through my binoculars gradually revealed a good-sized herd—here a cow lying down, there another, only the head and ears visible—and every now and then one or two would feed into and again out of sight. There must be a good bull somewhere in charge, we knew, if we could only ascertain on which side of the herd he stood or lay. Suddenly a hoarse challenge on the far side of the cows rang out, higher up the hill, and yet again from one spot. Bob and I exchanged a triumphant glance. "He sounds his own death-knell," thought I, as my companion whispered, "That's a big bull, and he's lyin' down, I reckon, t'other side of the herd."

We carefully retreated, and made a long detour, with a favourable wind, in order to approach the side where the bull lay. To stalk in thick timber up to a bull through a herd of cows was an impossible task. The country was rough and broken, fallen timber lay here and there; our progress was necessarily slow, but an hour later found us on the far side of where we had heard the bull whistle, and the final stage of the stalk began. I advanced slowly

from tree to tree, with picked and noiseless step, my companion a yard or two behind, my finger on trigger of rifle and my thumb on cock, searching with anxious gaze every opening through the forest in front. We were on a wooded hill, which descended rapidly beyond a ridge in front. Soon we were near the ridge, without a sight or sound of elk.

My heart began to sink. "I believe they're gone," I whispered to my companion; but he shook his head. Slowly we crept forward another yard, and gained another twenty feet of sight over the ridge. "Kill that bull," suddenly whispered Bob; and there, some sixty yards in front of me through an opening in the trees, I saw the dark head and ruffed neck of a bull elk, looking straight at us. He had heard us, and had that moment risen from his mid-day couch.

"That's not the big one, Bob," I whispered, for I could see a pair of horns, and they did not look large enough.

"Kill him, I tell yer," growled Bob, "and then run in."

I took a fine sight below the chin, and pressed the trigger. The forest resounded with the roar of the Express rifle, and the head vanished in a cloud of smoke. I rushed forward, loading as I ran, passed the body of a fair-sized bull elk—my shot had broken his neck—into a small glade, and "There's yer bull!" whispered Bob, as a gigantic yellow-brown body rose quickly into view on the other side of the open glade, eighty yards away, and a splendid

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old elk of the largest kind stood for a moment to gaze at the intruders. He had been lying guarding his harem down the hill below him, and keeping the younger bull I had just killed at a respectful distance. One stride would take him out of sight down the hill; this I knew. I also knew that he carried a magnificent head, the best I had seen that season. I was therefore over-keen and jumpy. With eye glued on the broad yellow side six inches behind the shoulder, I fired a rapid right-and-left, loaded and fired again as he staggered forward, stumbled, and then fell with a crash, stone dead.

My first shot—I knew at the time that it was high—had just grazed the back, and was to all intents and purposes a miss. Fortunately a quick second barrel had pierced his heart, and the last two shots were really unnecessary. He carried a noble fourteen-point head of fifty-eight inches that now adorns the house in which I write. Bob had correctly and rapidly diagnosed the situation. Had I not killed the smaller bull and run in at once, we had never seen his lordly rival and master.

In the foregoing pages I have written mainly of the Rocky Mountain wapiti, because I know about him from personal experience. President Roosevelt and Mr. T. S. Van Dyke, who, in collaboration with Messrs. D. G. Elliot and R. J. Stone, have recently (1902) published an interesting book on the Deer Family of North America, draw a distinction between the Rocky Mountain wapiti and the wapiti of the Pacific coast. The latter animal is stated to be a

trifle smaller. A good Pacific bull stands about 14 hands, as against the 15 to 16 hands of his Rocky Mountain brother. But the distinction is not clear, and to all intents and purposes the two animals may be considered the same species, with some minor distinctions of size, length of antlers, etc., as might be expected from differences of range and quality of feed. On the other hand, one of the finest wapiti heads I ever saw came from the island of Vancouver. Fifty or sixty years ago there were thousands of wapiti in the valleys and plains of California, and in the forests of Oregon and Washington. They have now been reduced to a small band or two that frequent a part of the coast range at the head of the San Joaquin Valley, where they are rigidly protected, and to a few small herds yet to be found in the roughest fastnesses of Oregon and Washington, where it is only possible to still-hunt them on foot. In reference to the wapiti of the Pacific Coast Mr. Van Dyke writes: "He seems to know more about the white man than any other animal, and when you consider the space that must now be traversed to ensure an acquaintance with one in his wild state, the elk of the Pacific Coast is probably the hardest game animal to secure by any means of hunting."

It has been suggested that I should add something here about rifles for big game and a word or two on their use. The following remarks are accordingly submitted with some diffidence, and with a thorough appreciation of the fact that most sportsmen and big-game hunters have their own ideas about sporting

Wapiti of California



WAPITI STAG;

TO THE
MOUNTAINS



ELK AND DEER TROPHIES—ROCKY MOUNTAINS.

rifles and their use, and that these are matters which must always remain largely a question of individual predilection and of practice in the field rather than of academic theory. Yet there are perhaps some points on which the younger race of riflemen may possibly gain advantage from the experience of their predecessors. For the larger game of America and Norway I have always preferred a double .500 Purdey Express. For red deer I use a double .400 Purdey Express, and I know nothing better for the purpose. My experience, however, was chiefly gained before the modern smokeless-powder small-bore rifle was invented, and there can be no doubt that the sporting Lee-Enfield .303, the Mannlicher, the Mauser, the Krag-Jorgensen—these latter all of slightly smaller bore than the Lee-Enfield,—are, as instruments for projecting a bullet, the most perfect type of modern rifles now made. Both in muzzle-velocity and in flatness of trajectory, and in consequent accuracy of shooting, all these smokeless-powder rifles are superior to the Express. Used with the soft-nosed or split bullet for all soft-skinned varieties of big game, this increased velocity is translated on impact into shock, and the rifle thus becomes so much the more a death-dealing and merciful weapon than the black-powder Express, apart from the question of relative size of bullet. On the other hand, what the modern small-bore gains in velocity it must to some extent lose in shock on impact, by reason of its lighter and smaller bullet.

I have killed wapiti with a sporting Mannlicher,

and found it most effective, particularly when any large bone was struck. Generally speaking, I found it a most handy and delightful sporting rifle to use. I eventually discarded it for my old friend the .500 black-powder Express for the following reasons:— First, I once shot a bull elk through the body with a Mannlicher and lost him in the thick green timber. In this case the bullet, though soft-nosed, must have gone clean through the body without breaking up. It probably did not happen to touch a bone. Had I shot that day with my old friend the Express, that bull elk would have been mine. Secondly, I found it easier to shoot quickly and accurately at running game with the heavier double Express than with the lighter small-bore, which was, I fancied, more easily affected by the “jump” of the rifle when fired hastily from the shoulder. This was no doubt entirely a matter of individual habit and previous experience. Lastly, I cannot get over my predilection for a double rifle. A second barrel has more than once saved my life, and I like to know that the second barrel is there. On another occasion I lost a chance of a right-and-left of wapiti bulls in thick cover when armed with the magazine Mannlicher. A single-barrel magazine rifle can no doubt fire a succession of five or seven or ten shots, according to the capacity of the magazine, far more rapidly than an ordinary double rifle. But for a quick right-and-left a double rifle is obviously necessary.

This latter objection applies of course only to the ordinary single-barrel magazine rifle. The sporting

smokeless small-bore is now made as a double rifle by all our leading gunmakers and up to .460 or even more in calibre. If I were commencing *de novo*, this is the variety of modern sporting rifle that I would be inclined to arm myself with for all species of big game the world over. A double .360- or .400-bore smokeless-powder rifle, with split bullet for soft-skinned game and solid bullet for pachyderms, appears to me to combine all the advantages of both the kinds of rifles I have mentioned. There can be no doubt that the increased velocity and flatter trajectory of the cordite-powder rifle are substantial advantages to the rifleman for all shots at game over 150 yards. Calculation of distance becomes less important, and as the bullet gets there quicker, one is less likely to haunch or shoot behind a moving animal.

As regards the killing power of a rifle, what is required in practice is that the bullet should penetrate far enough but not too far. In the case of my .500 Purdey Express, I have usually found in a fair broadside shot at a bull wapiti or a moose, where the animal was struck in the right place, just behind the shoulder-blade, that the base of the expanding bullet, flattened out like a large wad, lay just under the skin on the far side. This is exactly the desired and most merciful result. For it meant that the whole shock of impact of the bullet, coupled with just sufficient penetration and no more, was delivered inside the body of the deer, and this of course meant death in a few moments. If the bullet were to

expand too rapidly or to strike the body at an angle, it might only make a surface wound, and the animal might escape, possibly to die a lingering death. On the other hand, the enormous velocity of the cordite rifle bullet, even though soft-nosed or split, may occasionally carry it through the body of the animal before expansion, or a sufficient expansion has taken place. This is most likely to happen if the animal is shot a little too far back, when broadside on, and a little too low. The methods by which the desired amount of expansion plus penetration of the rifle bullet is to be obtained must naturally depend on the size and nature of the game, whether soft-skinned or pachydermatous, for which rifle and ammunition are required, and must necessarily rest with the gunmaker to carry out. The hunter can only speak of the practical result. Let us hope that it is the care of every big-game hunter to arm himself with a rifle that kills game in the cleanest and most effective manner.

How a sporting rifle should be handled and used is a question of practice rather than precept. A man may spend a lifetime in learning the art, and may soon lose his former skill of marksmanship from want of health or condition, or from cessation of practice. But it should be the object of every hunter of big game to shoot straight, not only for his own satisfaction, but also to avoid losing wounded game, as well as, at times, to ensure his own personal safety. Inasmuch as the actual shot at big game is usually a quick and sometimes a hurried business, success must chiefly depend on previous practice

Days of California



MOVING INTO A FRESH ELK COUNTRY—WEST AMERICA.

TO THE
ANTHROPOLOGICAL



14-POINT ELK--WEST AMERICA

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with the weapon used, for want of which practice no amount of thought at the time can make up. The rifle should be made to fit the user as carefully and exactly as his frock-coat. I always preferred a stock a shade longer than that of my gun. I have always found it advisable with a double .500 Express to grip the rifle fairly tight and press it well into the shoulder. In the field this must be done instinctively, as a result of constant previous practice. The best and most easily assumed shooting position, where time and the nature of the ground permit, is a sitting one, with an elbow on each knee. In practice, however, one has constantly to shoot in any position, standing, lying down, or kneeling; also occasionally when shivering with cold, or panting and exhausted after running or climbing uphill. Hence the importance of good condition, and sound nerve, and close familiarity with the weapon used. But some of these remarks are more or less academic, I fear. Let the young hunter go forth and find out the difficulties and attractions of the sport for himself. He will probably scorn the advice of his elders and prefer the school of practical experiment. Only after many failures and mistakes do most of us achieve success in rifle-shooting, as in other affairs of life. To miss a fine beast, or, worse still, to wound and lose him, are painful and unpleasant experiences for the ardent sportsman. This is worse, far worse, than performing badly at high pheasants or driven grouse on a breezy autumn day. For the former opportunity may be neither so easily nor so often retrieved.

On the subject of sights every practical rifleman has no doubt his own ideas and idiosyncrasies. The exact amount of foresight to take in varying lights and in up- and down-hill shots is something that can only be learned by constant practice with the same weapon. Ordinary sporting rifles are often made with a series of elevating flaps for every 50 yards of range over 100 or 150 yards. Personally, I consider these elevating flaps a mistake, and have never used them. I always have had them removed from my rifles or screwed down. The distance over point-blank range has to be instinctively calculated in any event, and this can in practice be done and allowed for up to all ordinary game-shooting ranges just as well, if not better, without any elevating mechanism. The operation of sighting is thus simplified, for nothing has to be altered. The possible danger of a flap being accidentally raised and unintentionally used at point-blank range is also avoided. I have known this happen with disastrous results on more than one occasion. Generally, I believe in the trained skill of the human hand and eye rather than in any elaborate mechanism for accurate alignment. Peep-sights, telescopic-sights, spirit-levels, and lateral adjustments are no doubt necessary in any rifle long-range target competitions at Bisley, but are not, in my opinion, applicable to sporting rifles used for the most part at comparatively short ranges. An exception may here be made in favour of the occasional use of the telescopic sight for deer-stalking, etc., in open country.

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Let the young hunter learn, then, as best he may to align the fixed sights of his rifle with firm hand and steady eye, to press or squeeze, but not to jerk or pull, the trigger, and as he does so to keep the bead steadily on the desired spot. Let him also learn to aim quickly, and yet to aim. This is no case of snapping at a woodcock in cover, or at brer rabbit flashing over a narrow ride. And on the resulting direction of the bullet's flight much satisfaction or disappointment—as the case may be—for the hunter may depend.





CHAPTER XII

CARIBOU

By WARBURTON PIKE

APART from its interest to naturalists and sportsmen the caribou has always been, and still is, of high economic value to the Dominion of Canada. A perusal of any of the old books descriptive of the early voyages of the officials of the Hudson's Bay Company or the Arctic explorers of the last century will show what an important part the caribou has involuntarily played in the past ; but perhaps few people realise that this animal furnishes the staple food and clothing supply for three-quarters of



CARIBOU COMING DOWN TO DRINK.

TO THE
ADVENTURER



MULE DEER, SHEEP AND CARIBOU HEADS

Canada's great area at the present day. To make my meaning clear, I must divide Canada into two parts—Canada productive, the long narrow strip, roughly 200 miles in width, adjacent to the American boundary line, where people live in all the luxury that civilisation gives ; and Canada the wilderness, taking in all the rest of the territory marked in red on the maps of North America, where a scanty population lives on what it can get from day to day, but looks to the caribou as the main support of life. Almost every district supplies animals or fish, in addition to the caribou, according to its natural features : the inland lakes produce white fish and trout ; the rivers of the Pacific, salmon ; the mountain ranges, sheep, goats, and bear ; moose are found in abundance where the willow bushes thrive, and the wapiti still exists in a few corners of the wilderness ; but with the exception of the immediate sea-coasts the caribou is everywhere, and its value is known to every native from Labrador to Alaska. It is still to be found, too, in the settled portions of Canada, except on the prairies, which are unsuited to its habits and afford it no food. It is especially plentiful in Newfoundland and British Columbia, but in the eastern provinces its existence must in future depend on the enforcement of the game laws. It occurs in limited numbers and under strict preservation in several of the northern States of America, contiguous to the boundary line. It has always been well known that there are two distinct types of this animal in Canada, one known as the woodland and the other as the barren-ground

caribou, these names being descriptive of the localities frequented by each type. The woodland caribou is much the larger animal of the two, probably one-third larger on an average, and is darker in colour, with fewer white markings than are to be seen on the skin of the barren-ground type. But a good deal more than this was known to the few men who had lived much among the caribou in various places, and had taken the opportunity of noticing the different appearance of this animal according to its surroundings. It was soon noticed that whereas the barren-ground type presented, practically no variation from end to end of the barren ground, with the exception of a few albinos, which would, of course, be conspicuous in such an open country, the woodland caribou shows a variation in almost every district and approaches more nearly to the barren-ground type in direct ratio as the local conditions resemble those of the barren ground itself. Nobody, however, was prepared for the action of eminent American scientists who have lately declared that the old-established rule of the two types of caribou is all wrong, and that a great number of sub-species of *Rangifer tarandus* must in future be acknowledged. In the list of American mammals published by the Field Columbian Museum of Chicago, 1901, the following sub-species are enumerated :—

Rangifer tarandus

Silvestris, occurring in Labrador, Lower Canada, Nova Scotia, New Brunswick, and Maine, extending

westward by the north shore of Lake Superior to Montana and British Columbia.

Terrae novae, the caribou of Newfoundland.

Montanus, in the Selkirk mountains, extending to south-east Alaska.

Dawsoni, inhabiting Queen Charlotte's Islands, on the Pacific coast.

Groenlandicus, the caribou of Greenland.

Arcticus, the barren-ground caribou.

Since the publication of this list at least two more varieties have been added, *Stonei* and *Osborni*, both from the Alaskan peninsula, and possibly there are many others that have escaped my notice, but it seems that any one desirous of being godfather to a new sub-species of caribou can do so readily in the course of an easy shooting expedition to almost any part of British Columbia or Alaska.

Whilst not wishing to offer any opinion in opposition to the decree of such well-known naturalists, I cannot refrain from recording a moderate protest against the multiplication of species and sub-species which seems to be so fashionable just at present in America. If the scientist can point out to the hunter any distinct structural difference in the skeleton of two animals, the hunter will readily accept his theory, but will refuse to be satisfied with distinctions based on size, the colour of skins, the shape of horns, or an extra quarter-inch in the length of ears, which may easily be accounted for by local conditions of climate and food-supply. The classification of a caribou from Queen Charlotte's Islands bearing the name

Dawson I must object to more forcibly. A caribou's head with only one horn was brought from Queen Charlotte's Islands more than twenty years ago, and was, when I saw it, in the possession of Mr. W. Charles, formerly a chief factor in the Hudson's Bay Company's service, residing in Victoria, British Columbia. There was nothing to show that the animal was killed on this group of islands, and it is very probable that the head was brought over by canoe from Bella Coola, the nearest point on the mainland, where caribou are known to exist within a short distance of salt water.

The Hydah Indians, natives of Queen Charlotte's Islands, have always been the most expert canoe men on the coast, and a voyage to Bella Coola is still considered by them a very small undertaking. The late Dr. G. M. Dawson mentions having heard a rumour that the caribou exists in the Queen Charlotte group, but states distinctly that no well-authenticated specimen has ever been secured. He did so much good work in the exploration of Western Canada, and was always so thoroughly accurate in his statements, that it seems a pity to couple his name with an animal whose very existence is so doubtful.

But by whatever Latin name we know him, the caribou is much the same in habit all through the wilderness, the same restless, uncertain beast wandering for ever without apparent reason, but always obeying a natural law as strong as, and very similar to, the law which governs the migration of birds in their proper seasons. The barren-ground caribou



CARIBOU SWIMMING.



GRALLOCHING CARIBOU.

must go towards the sea-coast every summer as regularly as the Lap's reindeer, thereby escaping in a measure from the flies, and finding a safe birth-place for their young. Most of the woodland caribou, knowing nothing of the sea, climb to the highest altitudes and spend the summer above timber-line, thus gaining the same result ; but there are bands ranging through the level plateaux of the interior which can find neither the sea nor the mountain-tops, and throughout the summer these bands are most uneasy under the influence of an instinct which compels them to seek what they cannot find, and they cover a great deal of ground within a comparatively small area. The coming of winter necessitates a retreat, in order to ensure food and shelter while the snow lies deep, and so the continual movement is kept up. I do not think the caribou have any special preference for a particular route, as I have frequently seen stated, or that they return to the south from the sea or to the forests from the high mountain-tops by exactly the same path that they followed in the spring. They have a strong inclination from obvious causes to travel and feed against the wind, and a long duration of any particular wind would throw them a long way off their line of march. There are many well-known passing-places for the caribou which they almost invariably use, but on inquiry I think an explanation will be always found in the configuration of the surrounding country. Two large lakes may be separated by a narrow neck of land, a low pass may intersect an

abrupt range of mountains, or a dozen other natural causes may enforce the passage of the caribou at the same spot every year. The Indians of the Athabasca and Great Slave Lakes have not been able to depend on any established passes, and it frequently happens that one band of hunters is actually starving to death while another band is living in plenty within the distance of a day's travel. As a matter of fact the caribou often seems to prefer a long swim to a short one, and will frequently cross a lake a mile in width rather than walk a few miles around one end of it. By nature the caribou is confiding and full of curiosity: his first inclination on seeing an intruder is to come up and play with him, especially in an open country or on a small frozen lake. As long as a man cares to run up and down in an idiotic manner, a band of caribou will keep up the game at short range; but a direct approach at a walking pace will drive the frightened beasts away at full speed, and when they are once thoroughly alarmed the chase may be given up as hopeless. Of course, in the more settled districts the caribou has found his confidence misplaced, and occasionally shows signs of extreme caution; but this is not his natural state of mind, and sooner or later his curiosity asserts itself, and the animal falls an easy prey to the first hunter who takes the simplest precaution in his approach. When the caribou are gathered together in the enormous bands that travel into the woods from the barren ground in the autumn, they are absolutely fearless, and have been known to pass through the scattered out-

buildings of a Hudson's Bay Company's Fort. The Indians have many stories of women seeking refuge on an isolated rock and being unable to cross the living stream of caribou for a couple of days at a time. Almost all the actual necessities of life for the Indians of Northern Canada are provided by the caribou. They are not bread-eaters, for their country will produce no grain, and an abundance of meat is all they really want. They like the taste of the white man's luxuries in the form of tea, sugar, and tobacco, but these good things are only to be obtained in very small quantities after a very long journey, and there can be no hardship while the caribou are plentiful.

Their skins make the best coat that has ever been invented to resist extreme cold with sufficient lightness to enable the wearer to walk a long distance in comfort. This fact was soon discovered by the motley crowd of so-called miners who made their way to the Klondike at the time of the gold rush. They started with the greatest variety of heavy clothing, each man proclaiming that his own costume was just the thing for a cold country, but the second winter found the survivors all clad alike in the local parka made of caribou skins. The walls of an Indian lodge are made by stitching together some twenty tanned skins, his mocassins and mittens are made from the same material, and every bit of babiche with which he makes the web of his snowshoes, or which he uses for fishing-nets, snares, lashings, or any purpose for which we use string,

has been cut from the skin of a caribou specially selected and prepared with this object. The art of cutting really fine babiche has been almost lost since firearms and steel traps have come into general use. When snaring was one of the chief ways of killing the caribou and other animals, a great deal of the hunter's success depended on the neatness with which the babiche was cut ; but since this necessity has ceased, the women, who have entire charge of the skin tanning and cutting, have turned their attention to ornamental work of beads and porcupine quills. Thus, then, the Indian has all the essentials of life furnished by one animal, and the fact that he spends a great deal of his time in privation must be attributed altogether to his own improvidence. He prefers living from hand to mouth and following the caribou in a leisurely manner, to making an attempt to lay in a big stock of provisions in one place, and employing his leisure moments in trapping the fur-bearing animals, which would supply him with many luxuries from the nearest trading-post. He has the same wandering nature as the caribou, knowing no fixed abode, and taking no thought for the morrow. He is wasteful of meat when he has plenty, and will leave whole carcasses that might easily be dried for winter food, because they do not happen to be fat. During periods of starvation he will tell you with pride how at a certain lake he used to throw away the thin ends of the caribou tongues because they were a little tougher than the thick ends, but nothing will teach him to take better care of the

next supply of meat that he falls in with. The Indian's methods of hunting the caribou are simple in the extreme, and owing to this animal's great lack of caution, which I have already mentioned, they are almost invariably successful. In a rolling country where stalking is quite easy, he will often observe the usual precautions, but in an open level country, and especially on a frozen lake, he will usually start running straight towards a band of caribou without regard for the direction of the wind, or taking advantage of any possible concealment that may lie in the way. If the animals run away promptly the Indian goes back to camp and reports the caribou to be wild, but proceeds to the attack again on the next day in a similar fashion. Probably on this occasion the caribou are in a playful mood, and the slaughter is heavy. If ammunition is scarce the hunter has to be more careful, and a very favourite plan of campaign is to plant a line of scattered spruce boughs in the snow across the whole width of a lake. The caribou refuse to pass this line, but will skirt it closely and take the shore again at one end of the barrier. If a man lies in ambush at each end a very close shot renders a kill certain with a small expenditure of ammunition. If there is only one hunter a snare is placed on the opposite shore, and in case of an absolute dearth of powder and ball a snare has to be rigged at each end of the line. When the lakes are open the same plan may be worked by piles of rock forming a wing on one side of the lake, as the caribou will usually take to the water in preference to looking

for the inland end of the barrier, and once in the water stand no chance against the little canoe and the murderous spear. By this method the great massacres of caribou are made, and it is quite a common occurrence for a band of Indians to kill several hundred at a time, as they spare nothing, and are very adept in handling their canoes and spears. Then follows an orgy of meat-eating for men and dogs, for a few days tons of good food are wasted, and the Indians move on with a few of the best skins, and perhaps enough meat to last them a week.

It is only in the barren ground that these immense killings can be made, as the caribou of the mountains roam in smaller herds, and frequent more inaccessible places only to be reached on foot, and here the use of ammunition is imperative and too costly to allow of much waste. In spite of the immense number of caribou killed at all seasons of the year, there does not appear to be any decrease in the size of the herds; and, in fact, in many parts of the wilderness there is a rapid increase, as the natives die out, and a great deal of the country is unable to sustain the white population. This is particularly noticeable in the northern part of British Columbia, and the adjoining part of the North-West Territories, where several deposits of gold have been found during the last thirty years. A rush of miners brings all the vices of civilisation in its wake, vices very attractive and very harmful to the Indian. The gold is soon extracted, the miners seek fortune elsewhere; but the Indians die out rapidly, and



*CARIBOU—BARRON GROUND.
Owned by Sir Edmund Loder, Bart.*

TO VINU
AMROUO



STALKING CARIBOU.

the caribou are left in peace, and are at the present time much more numerous than in the early days when the native population was comparatively large.

The natural increase of the caribou also seems to be regular, as barren cows are not at all frequent in the herd, and twins are not uncommon. I have been told by Indians that they have sometimes seen a cow caribou with three calves, but cannot confirm this from personal experience. The mortality among the calves must be great, however, as wolves are always in attendance on the big herds, and can have little difficulty in securing a calf at any moment.

The horns of the caribou, which are one of the most beautiful trophies of the sportsman, vary in size and shape in every district ; each range of mountains seems to have its own particular type. In the more southern latitudes they are clear of velvet by the middle of September, but carry it later in Arctic regions. The big bulls have all shed their horns by the middle of December, but the young bulls and cows carry them much later. I once killed two young bulls with horns at Dease Lake, in the Cassiar District of British Columbia, on March 8.

The sportsman whose time is limited, and who only wants a couple of caribou heads to hang up on the wall, can get them quite easily without going far from the Canadian Pacific Railway. Newfoundland is, of course, the nearest point for an Englishman ; but the game laws there are not encouraging to strangers, and it would probably be better to go

right through to British Columbia, where the heads are good and game is plentiful. But nobody will ever know the caribou intimately or fully appreciate his value without making a long expedition into the heart of the wilderness.





CHAPTER XIII

MULEDEER, BLACKTAIL, AND WHITETAIL

By CLIVE PHILLIPPS-WOLLEY

THERE are some characteristics common to all the deer of North America, and such important characteristics from a sportsman's point of view that a writer on sport is almost tempted to treat all the American Cervidae merely as "deer," holding that what applies to one applies to all, from the giant wapiti to the elusive whitetail.

All American deer are infinitely too fond of timber to afford the best possible sport to the stalker. That is their principal fault.

We count on this continent seven principal varieties of the Cervidae: the Moose (*Cervus alces*), the Wapiti (*C. canadensis*), the Woodland Caribou (*C. tarandus*), the Barren-Ground Caribou (*C. tarandus arcticus*), the Muledeer (*C. macrotis*), the Blacktail (*C. columbianus*), and the Whitetail (*C. virginianus*).

There is another small deer described by Caton

as a North American species, *Cervus acapulcensis*; but this animal occurs so far south as to appear to belong rather to Central than to North America, and is in any case little known to any except naturalists. To me it is quite unknown.

As I have already dealt separately with moose, and as other writers are to deal specially with caribou and wapiti, there remain to me only muledeer, black-tail, and whitetail; and it seems to me that I can bring out their points of resemblance and difference better by dealing with them as a whole than if I gave a chapter to each.

The biggest and best of these three from a stalker's point of view is undoubtedly the muledeer; but even he is rather the quarry of the still hunter than of the stalker. In this condemnation falls, of course, the moose, and even to a very large extent the wapiti, unless he loves the open much more in other districts than he appeared to do in those parts of British Columbia and Colorado in which I hunted him.

To my mind sheep and antelope upon this continent alone exercise the full powers of the stalker (as understood in Scotland).

The still hunter is other than the stalker. "Spying," which counts for so much in stalking, counts for little in a timbered country, where patience and soft-footed stealth are more essential than they are upon the mountain-side.

To the trials of ever-varying wind and watchful hinds, the still hunter has added the miseries of a labyrinth of fallen timber in which oftentimes he can



WHITE TAILED DEER.

70. VINU
ABON: 140



WHITE TAILED DEER—YOUNG BUCK.

barely climb, unless he has a prehensile tail, and in which he must on no account tread upon a dry twig, though there is absolutely nothing else to tread upon.

With muledeer the hunter's difficulties are to some extent mitigated. As men have never attempted to "clear" in those districts in which the muledeer is most common, he does not haunt those accursed institutions known as "slashings"; and though there are woods everywhere in British Columbia, those woods which the big stags love best are thin grey dead woods near the timber-line, unless it be in late autumn, when the muledeer come down to the green timber.

In the very early morning in September the big bucks may be seen feeding in the open on the edge of the sheep-lands above timber-line, or sauntering up from the lowlands whilst the moon is still in the sky and the dew makes the sage-covered benches above Okanagan lake gleam like frosted silver.

But though I have seen them do it, the stags very rarely lie out in the open in the day-time. They certainly do not do so where they have been much disturbed, and for that reason, unless you are fond of shooting at a jumping buck in timber, you had better hunt your muledeer in the grey of the morning.

The muledeer is found almost everywhere west of the Rockies, and used to be found as far east as the Missouri. He still abounds in Colorado, Montana, and Wyoming, and is found as far south as California. I am obliged to write *almost* everywhere west of the

Rockies, because, strangely enough, he does not exist upon Vancouver Island or upon any of the smaller islands west of the British Columbian mainland. This is doubly strange, because the great wapiti is practically non-existent on the mainland of British Columbia, but reasonably plentiful on Vancouver Island, whilst such traces of him as cast antlers are still found upon some of the smaller islands in the Gulf of Georgia. There are no such traces of the muledeer.

At the extreme western edge of the mainland of Canada, and upon the islands west of that, the muledeer is replaced by *C. columbianus*, the blacktail, which is also found on the adjacent coast-line of the States.

I am not quite sure that this replacement is absolutely thorough, because I have seen deer in our game shops, said to have been sent down from the Skeena river, which were so large as to resemble muledeer more than blacktail, and I shall show immediately the differences between muledeer and blacktail, size apart, are not very conspicuous to any one but a naturalist.

The American authority, J. D. Caton, whose opportunities for studying American deer appear to have equalled his scientific attainments, marks the following principal points of difference between the two beasts.

The muledeer, he asserts, is much larger on the average than the blacktail ; its ears are larger, though the ears of the blacktail are large for the size of that

beast ; the colour of the muledeer's tail is white, terminating in a tuft of long black hairs, and naked underneath ; the colour of the blacktail's is a tawny, dull black, except as to one-fourth of the circumference of the tail on the under side, which is white. Both tails are short and round.

The metatarsal gland is smaller in the blacktail than in the muledeer. The tarsal gland is about the same in both. The most conspicuous colour-markings seem to me very much alike in both species.

On the other hand, the most characteristic feature of both blacktail and muledeer is the gait of either of them. When startled both take to flight in a series of buck jumps, in which all four feet leave the ground at the same time and return to it simultaneously with a jarring thump. These deer seem to jump stiff-legged, and this strange bouncing action is kept up until they are tired or out of danger. I know of no other deer except these two, so much alike in all else, which adopt this form of locomotion.

Again, their antlers, where they are at all typical, are practically the same. A typical full-grown muledeer buck carries ten points, *i.e.* two short upright snags an inch or two above the burrs, and two main tines on either side, both bifurcated. So does the blacktail.

The only difference that I know between the two is that the muledeer's "head" is very much larger than the blacktail's, and that whereas I have never seen an island blacktail's head which much exceeded

the normal number of ten points, I have seen a muledeer's head which carried fifty-nine points, and heads with points far in excess of the normal number are comparatively common.

Mr. Ward in his *Horn Measurements* cites a muledeer's head obtained by Mr. H. A. James in Colorado, which measured 30 inches in length, $5\frac{3}{4}$ inches in circumference, 41 inches across the widest inside span, and had a total of seventeen points. This, as far as I know, may be looked upon as a "record" muledeer head.

The same authority gives in his list of "blacktail" heads (*C. columbianus*) one of which the habitat is not specified, one entered as coming from North America, and eighteen from *Wyoming*. All these would be phenomenally large for *C. columbianus*, but the first head cited as coming from the true habitat of the blacktail (Sir Victor Brooke's Californian head) is a little smaller than the biggest true blacktail obtained by me upon one of the *islands* off the mouth of the Stickeen river.

Oddly enough, above this list Mr. Ward gives the blacktail's habitat accurately as being "California, Oregon, Washington, and along the Pacific Coast." In this he follows Caton.

Does not this at least suggest that the blacktail is so like the muledeer except in size, as to have led such an experienced judge as Mr. Ward must be, and as the owners of the various heads probably are, into error? I confess myself liable to fall at any time into the same mistake.

My large head measures in length $21\frac{1}{2}$ inches, inside span 20 inches, and circumference above the basal snag 4 inches. The head has the normal ten points, with very large burrs heavily pearly, and two small pendent thorns about an inch in length right on the brow. I have never seen as large an island head elsewhere.

As to the weights of these two beasts, I think that a well-grown muledeer stag from the best feeding grounds of the mainland would probably exceed 200 lbs., whilst an equally typical well-fed stag of the blacktail killed on Vancouver Island might reach 150 lbs., both of course live weights, but I have heard of muledeer which weighed 300 lbs., and blacktail which weighed 200 lbs.¹

I find it easier to believe in the former than in the latter, and, as a matter of everyday experience, the truth is that a very large number of the deer (not always full-grown bucks of course) killed round here are packed out on the hunter's shoulders, and, except in northern yarns, very few men can pack more than 100 lbs. through and over timber. I have packed a two-year-old blacktail, cleaned and beheaded, for ten miles with my rifle and blankets in a pouring rain-storm, and the more I see of these beasts the more I am inclined to reduce their *average* weight, and to discount the pleasure of hunting where you cannot take a horse to pack out your game.

¹ Since writing this I have obtained perfectly reliable information of a blacktail buck, killed in the Westholme district of Vancouver Island, which weighed 148 lbs. cleaned, and of two which dressed at 110 and 112 lbs. respectively. They were sold to a mining camp.

My acquaintance with the whitetail (*C. leucurus*) has not been as intimate as I could wish, but I have hunted him in such widely distant localities as the Mattawa district of Ontario, in British Columbia, and in Saskatchewan. He is par excellence *the* deer of North America, and is found all over Canada and in every State of the Union.

In size he appears to me to be about the same as a good blacktail buck, but I think he is a longer beast upon longer legs, and I have no doubt that those who claim for him more than 150 lbs. are accurate enough in some districts. It can hardly be that a beast with so wide a range, which is found sometimes on the high mountains, sometimes in deep swamps, sometimes in the driest and at other times in the wettest places in America, does not vary considerably according to the nature of his feeding-ground.

But I do not believe that his most reprehensible conduct ever varies. He is the daintiest woodland darling that I know, but, like most darlings, he leads you the devil of a chase through all the worst places in the world, and generally makes a fool of you in the end.

Whitetail are not common in British Columbia, or at least they are very local in their distribution. There are a good many in the Fort Steel district and in East Kootenay generally, and there are a few elsewhere.

I spent my last short hunting season with a small band on Rock Creek, and as the story partly illustrates whitetail hunting, here it is. The ground alone was

not typical. It was far too good from the hunter's point of view, consisting of the lowest of the foot-hills above Rock Creek, a series of low hogsbacks, mostly timbered except at the top where the creeping red berried kannick-kannick grew, and always timbered in the intervening gullies, the density of the timber varying in proportion to the amount of water coming down the gully. If the gully happened to be dry, the trees in it were pines, and a passage through it easy enough. If the gully was wet, the timber in it would be alder, and then your best chance was to stop outside until any deer harbouring in it chose to come out to you.

Here in a very tiny area lived a fair-sized band of whitetails, and over them reigned a buck with a very splendid head, with as many tines as a hawthorn bush has thorns.

I had seen him twice. The first time we met, my companion overestimated his distance and overshot his beast, as men do nine times out of ten, and the second time we met I could not believe that the grey thing sneaking through the thick alders with its head down was anything but a miserable hind until it was too late to fire. A minute later I had a beautiful view of him undulating over some fallen timber at a distance well within the compass of my rifle, but a long way beyond my hitting powers. Others may know how to hit a whitetail at 150 yards as he rises and falls over timber, his flag waving as he goes.

I shall never learn the trick now.

On my last day on Rock Creek, it was already nearly nine o'clock, and I had so far failed to find any

traces of this buck, but just as the sun began to warn me that man's day was beginning and the active part of the beast's day already drawing to a close, I stumbled on a track so large that without regarding it very closely I took it to be the buck's.

As far as I knew, there were only whitetail in these particular foot-hills, and no other whitetail in them could have made such a track. At the end of three weeks of failure a man ceases to be careless, and remembers most of the lessons he has learned, so that having made absolutely certain that there were no deer loitering on the hogsback in front of me, I took a course parallel to that apparently taken by the buck on the other side of the hogsback. In 300 or 400 yards the hogsback terminated or rather ran down into a very open basin, beyond which was a large clump of such brush as the deer were then feeding on.

I did not trouble to go over and inspect the track again. I knew that the buck must have come to the end of that hogsback, and that if he had, he must have been tempted to wander on to the brush patch. So I stalked that brush patch as carefully as if it had been a deer looking my way, and when I reached it was rewarded by finding the great tracks again.

He had gone round it to the right, and as the wind was a cross wind from right to left, luck was still with me. I went round expecting to meet him or may be catch a glimpse of him strolling up to the bench beyond for his beauty sleep.



PACKING A MULE DEER DOWN A RIM ROCK.

70 MILE
SUNDRIAL



MULE DEER BUCK.

Before I had crept half-way round the brush patch I heard a bough swish. At once I dropped on to my hands and knees. Luckily the brush was thick and the wind still from him to me, but so silently had he come that we almost met before I saw him. Indeed, as I cowered on my knees I could just see a mass of colour moving slightly through the web of twigs. The next moment my rifle ought to have rung out the death-knell of the master of Rock Creek, but instead a few heavy boughs were pushed aside, and an over-fat muledeer hind swaggered into view, with her hands as it were in her pockets, nibbling critically at one last sweet shoot of brush. If she had come another ten paces she would have walked over me. As it was she stood dozing with an unchewed twig in her mouth for a moment, and then with a great sigh of satiety and content, her knees bent, and she sank down quietly to rest.

It was the first time that I had been practically bedfellow to a deer, but I had my camera on my back and had no time for wandering thoughts.

She was so close to me that I only dared to use my fingers, keeping my arm by my side, but at last I had everything ready except the shutter, and Madame was still as unconcerned as if man had ceased to exist.

But the shutter made a faint noise like the raising of a rifle's hammer, and at the click of it my dozing deer was apparently six feet off the ground. It was all done in one movement. In less time than it takes me to write, that muledeer hind had reached the next

rise in a series of stiff-legged leaps which suggested steel springs rather than animal muscles.

It was a disappointment and an exhibition of distrust unworthy of the sex.

After that I toiled all day and took nothing except a great deal of pleasure out of a flirtation with the most beautiful and coquettish young whitetail doe I ever saw.

She cannot have been more than a yearling, and when she jumped from some brush close to the trail on which I was riding at mid-day I should have left her unmolested, though we wanted meat in camp, but that she stood so saucily at gaze that it occurred to me to try how near I could come to her by circling.

My horse was a grey, and I do not know whether his unusual colour attracted her, or whether she had never seen a horse before, and failed to recognise the biped on his back as an enemy.

I used infinite patience and care, allowing my horse to feed his way slowly towards her, and though at first she was skittish, she at last allowed me to come within thirty yards, and once she made for me a picture at something over half that distance which would have made an animal-painter's fortune. She was feeding at the foot of a great tree, with one eye on the horse, and as I came close, she turned her head to look up at us, lifted her near hind leg to scratch herself delicately behind the ear, and I wouldn't swear that she did not wink at us. The moment I tried to focus her she was off again, waving her white flag in

an invitation to another game of hide-and-seek. But I had already spent nearly an hour playing with her and could spare no more time, so I left her in peace.

In a long experience of the woods I have never been on such intimate terms with deer as I was twice on that day, but then they were both deer that I did not want.

In the evening, just as the dark began to fall, I was on foot again, and had been moving so slowly and so softly that I rarely heard my own footfall. I was on the home trail, and my hunt was over ; the end of it failure as far as my main object was concerned. In front of me was a gully full of alders, and between that and myself a great cedar-tree whose roots went back into the alder patch, and to the left of the cedar's bole was the thing I coveted. It looked as if the stag's head grew out of the cedar, for nothing but the head was visible, turned full face towards me, watching me, crowned with the most beautiful many-tined antlers I ever saw.

For a full minute he and I were turned into stone. I have never been more than an ordinarily good shot, and I knew that at nearly 100 yards in that light I was by no means certain of hitting the small fraction even of that small mark which should ensure a kill, and it would have been a crime to smash those horns.

So I waited for him to come out and show his shoulder. I might as well have expected a wood pigeon to come out on my side of a beech-tree. My eye never left him, and yet he went, nor can I say

that I saw him go. I heard a deep-drawn "phew," and he was not.

Once again, as I passed carefully through the alder bottom, I heard the same sound and an angry stamp of his hoof somewhere in the darkness, just to let me know that he still had his eye on me, but he never broke a twig or rustled a leaf.

Let me draw a moral and convey a few of the hints which I have picked up in deer hunting.

If you do not love the game so much that you would be content to play it without ever winning a prize, don't waste your time upon it. Still hunting is not the game for the pot-hunter or the man whose time is valuable. It is the game par excellence for the man who loves the woods and the wild things of them.

In writing of our small deer, the true blacktail (*C. columbianus*), I cannot help speaking of him with a certain amount of affection in spite of his many evil habits, because he is in his way a great and true friend of my native country. He is the real musketry instructor who teaches the youth of British Columbia to become marksmen valuable to the Empire; he is in no small degree the advertising agent who, by his presence, attracts the masculine adventurous element to settle in our lands, and he provides much of the meat which feeds our pioneer settlers, and for these reasons it is infamous that our Government is not more active than it is in suppressing the sale of hides, which alone seriously threatens his existence.



A MULE DEER IN TROUBLE.



OLD LOG CABIN.

The woods he lives in will always be sufficient protection for him against his natural enemies, Indian and white meat hunter, wolf and panther, but not against the money of the Jew skin-trader.

The *muledeer* is still so extraordinarily plentiful in some parts of the interior of British Columbia that I have seen cords (a cord is 4 feet by 4 feet by 8 feet) of piled hides round an Indian camp, and the black-tail on Vancouver Island vies with him in number. I have known two men kill twenty-two blacktails in one day within twenty miles of Victoria, our capital, and I believe that it might still be done to-day by equally fine and unscrupulous hunters.

Two miles from where I am writing rises a steep bluff of Salt Spring Island. There are settlers' houses at the base of it, and yet in the little piece in view of me a tenant of mine had eight blacktails in easy shot of him the last time he went over to replenish his larder.

There are plenty of deer, and close to the settlements, but they are not too easy to obtain unless you fire-hunt them, that is, hunt them in the orchards and pastures at night with a pit-lamp on your head, to show up their eyes as they stand wondering what you are, or drive them on the mountain-side as our Indians do, with the rifles on the open places near the ridge, and the boys and women clamouring as they clamber up from the shore-line through the thick gullies and young pine brush where the deer lie.

The local sportsman who wants to kill a blacktail fairly chooses the worst and wettest day that our wet

winters can produce, reckless of rheumatism and the rain which soaks into his marrow. Then the brush is soft and soundless under foot. Rain and wind combine to deaden what little noise the hunter may make, or to confuse it with so many similar sounds that the deer fail to distinguish the true note of danger from the false. Then, too, the deer are uneasy and move about all day. They cannot lie in comfort in the thick sal-lal bushes; the crowding pines drip on their staring coats, and the rain worries them out on to the ledges, where a man may see them sometimes before he is seen of them.

Personally, having my full share of sciatica very honestly come by, I prefer to wait until the rain has ceased and the sun has come out, and I believe that my plan is as sound as the more popular one, for when the rain has stopped the chilled and comfortless beasts come into the open where the sun can dry and warm their hides, and this is the opportunity for the man who knows where the sunniest spots are likely to be.

In the Gulf of Georgia many a shot may be secured at such times and in the very early morning by paddling quietly round the points of the islands with your eyes open for dim outlines against dead ferns, and not bent on seeing "monarchs of the glen" against the sky-line. But in any case you want the rain to help you, unless you are up very high and very early, as hunting in young pine and gorges full of sal-lal, unless you have a good dog to put the deer out, is more fun for the deer than for the hunter.

At such times the deer are lying *still* in cover from three to five feet high, or under logs. They do not move, and therefore neither make any sound nor catch your eye, but as you move they both see you and hear you. In nine cases out of ten, if you do not go too close to them, they will lie still and let you pass them, and if they move all that you will see will be a furious waving of thick scrub, a narrow streak of red, and then two bucking jumps on the top of the opposite side of the gully. There are half-breeds and Indians (a very few) for whom this is enough, and I have no doubt that there are white men who can beat them, only I have not met them. And even those of us who have made these snap-shots with the rifle have not had much satisfaction out of our success. You cannot hope often to make a clean kill in this way, and a beast going away with a swinging hind leg or its bowels protruding is a brutal sight, nor is the following of a wounded deer through thick places a pleasant way of passing a day even if you get him at last, which is by no means a foregone conclusion.

In the slashings in which deer love to lie, the hunting of them is if anything more full of evil than it is on the mountain-side.

A friend of mine who is a hard-bitten master of hounds in the old country, lost himself in my little slashing this morning, and having spent half an hour in coming a little over half a mile, returned dumb and dripping. He had not an ounce of fat, he said, or a single swear word left in him. And no wonder. A slashing is a space in the forest which has been

felled, the trees left in many cases as they fell, with their boughs still on them, and if it is an old slashing, the alders and willows and brambles will have grown up, and wound all over the chaos of dead fall until nothing but a deer, or a fire, or a running pheasant could get through it.

Here the deer lie, and your task is to navigate the slashing like a Blondin, seeing nothing until a briar takes you round the neck and pulls you down upon the sharp end of a lopped bough. At that moment you express very natural sentiments, and as you do so you hear what Van Dyke translates "thump-k-thump," and you are expected to hit a mark about as big as an orange, which is part of an object appearing and reappearing at intervals over the logs from 50 to 100 yards to the right of you. I have known men who could not do this every time.

But if you really want a blacktail, and have patience, here are a few hints which may help you.

Find out *from men who kill game* where deer are fairly plentiful ; travel as far and as fast as you please to get to this ground, but once there *stop travelling*. If you are in the place where you expect game to be, what is the use of travelling any farther ? You can't catch the deer, and you cannot help frightening them if you will tear about through the brush holloaing every now and then to find out where your friend has gone to.

Go alone, and once in your ground, loaf about quietly. Sit down often in likely places, and watch as if everything depended on your eyes and ears.

Remember that deer, like yourself, prefer sun in winter and shade in summer, and hunt the proper slope of the mountain for feed and sun.

Don't forget that deer depend upon their noses as well as upon their eyes and ears. Treat the wind with respect.

Don't dash over a sky-line. Crawl up to it and lie down where you can peep over it, and watch the ground beyond for half an hour if you like. Don't follow a trail, because deer watch their back tracks, but take advice from it, and go by another route to the place to which it seems to lead.

Believe me that it is almost true that you cannot go to the deer, and that your best chance is that he will come to you, and so will you sooner or later share such luck as I have often had. You will either see a buck rise and stretch himself in a spot at which you have been looking for a long time, or will see him come stepping gently with neck craned forward into the space which your sky-line commands, or appear unannounced and unaccountably in full view of the log on which you have been sitting for half an hour.

Then remember that all your misses will be over his back, therefore aim low, and for heaven's sake *keep your eyes off his horns* until afterwards.

Don't shoot until you know not only what you are shooting, but at what part of the beast you are shooting, unless you wish to kill a man or wound a buck, and when you have shot, keep still, whether you have hit him or not. If you have hit him he

will not go so far if he does not see you, and if you have missed him he may not go at all for a second or two.

When he has gone, go and look carefully for hair or blood and follow his tracks for at least a quarter of a mile. Many a beast which has been fatally wounded has been lost because he did not show to the shooter that he was hit, and did not begin to bleed in the first hundred yards.

Finally, forgive a man whose best days were in the woods and are over. Remember that our national character is often on trial before men who only know and see the wandering hunters of our race, and whilst you are hard as a man on yourself, be merciful as a woman to the beasts. Kill as sparingly and as painlessly as may be, and if you want a book to read in camp, and more sound advice than any other man can give you upon "still-hunting the blacktail," take Van Dyke's *Still Hunter*. I have had two teachers—Van Dyke and experience, and they invariably agreed. He is to the American still hunter what Peter Hawker was to the English wild-fowler.





DEER SWIMMING.

TO THE
MOUNTAIN



LOOKING FOR MOUNTAIN SHEEP.



CHAPTER XIV

MOUNTAIN SHEEP

By CLIVE PHILLIPPS-WOLLEY

ARE there two better things in this world than the morning of life and the dawn of day? It must be down hill now for some of us for the rest of the journey until the camp is reached, and the pity of it is that on the down-hill journey every step tires as much as three in the morning. But as we plod steadily on for the appointed distance, trying to ignore tired and aching limbs, we may cheat the journey of half its distance by conning over again the joys of dawn. And surely at dawn the mountain sheep was the hero of the young man's country, that land away back, far above the bothersome timber of

the valleys, that land to which we climbed when the moon was growing white in the sky, our limbs stretching eagerly, hungrily almost, upwards and always upwards, over the springing turf, until we came to where the purple of the hills still had concealed in its folds little pockets of unmelted snow, and in the glory of the rising sun the Indians' "painted cup" burned a vivid crimson amongst the grass which the snow still made lush, though all around the hollows were full of sun-dried mountain hay. There, above the last of the cold-warped, wind-twisted trees, bleached dwarfs who had wandered beyond their own world, the great hill-tops rose into the still sky, and over them went nothing but the silent shadows of the clouds, the keen, sweet wind, the big-horn, and his hunter.

To the present writer, having tried many kinds of game in many lands, *Ovis montana* has no peer. The thar of the Caucasus dwells in wilder solitudes and nearer heaven. There is a savage majesty there about the peaks and ridges, set with gigantic up-ended gravestones, and flanked by dizzy precipices, from which you look down into a white sea of clouds, and it takes a better man to kill a thar than it does to kill a big-horn, but the one is work, bitter, hard work, justifying the Russian proverb that "sport is more exacting than slavery," and the other is pure pleasure, just hard enough to exercise every muscle and send a man home to his blankets by a roaring camp-fire, breathed but not blown, tired enough for one day but with plenty in reserve for the morrow.

In spite of all the hairbreadth stories and wonderful pictures of sheep-hunting, in which men climb and cling by their finger-tips to overhanging rock faces, I have never seen sheep where I could not follow them when I was a young man without dreaming that my life was in danger.

People need not attribute 'to sheep-shooting the accessories of ibex-hunting, to win votaries for the best sport on earth. Men can try every mental faculty they possess in outwitting the big-horn and circumventing that grey-faced ewe who is always between the hunter and the biggest head, and they may try lungs and leg muscles as much as is good for them, but the trial of courage is reserved for that stern sport where men cannot go by foot alone, but must crawl and cling and look upwards for fear lest the mere aspect of the places beneath them should draw them down, places which they swear never to revisit if the gods let them escape with their lives, and to which they return, if they are men, at the very first opportunity.

The ideal home of the mountain sheep is a great rounded mountain top, rising bald above a fringe of timber, and having somewhere about it a sharply broken hill face, to which the sheep may retire when pressed by any of their enemies ; such a hill face as a pony could not travel with comfort or a wolf hunt over, but not a "precipice."

In a pamphlet which I am not going to name because it is too good to find fault with, it is stated that "when the raging storm and deep snows of

winter drive the elk and deer down into the valleys for food and better shelter, the mountain sheep makes no perceptible change of locality.”¹

I cannot agree with that.

In early autumn, when the rams should be hunted if you want to enjoy sheep-shooting to the full, you will find your game at the highest points in the range, feeding as near the snow as they can and sleeping on the bare, sun-warmed shale.

In winter you need climb very little above the level of the Fraser river, for unless the sheep are much disturbed, you will find them in November on the flat, wind-swept benches which rise step above step from the river bed.

I believe, I don't know, but I believe that in the late summer, by which I mean July and August, all the sheep will be found on the open tops. As the snow goes the young grass springs and the sheep cling to the edge of the disappearing snow.

In September I have found them a trifle lower down when feeding, and that I believe is because the grass round the timber's edges is not so parched and burnt as that on the open hill-tops; but the sheep go up again when they have fed, and in October, when the grass on the highest uplands has revived a little, they seem to spend most of their time at the tops.

These are the situations in which you ought to

¹ This applied locally would be true enough. In Cassiar, for instance, the sheep keep to the tops. On the Fraser they come down even to the level of the ranches.—C. P.-W.



TYPICAL HEAD—OVIS MONTANA.



MR. J. MCKAY'S SHEEP.

TO THE
AMERICAN



A MOUNTAIN CAMP.

find sheep, but I have also found them *once* feeding on the flat with cattle. I have heard of their being "roped" by cowboys, and I have myself ridden after them until they bunched and stood at gaze like frightened cattle. Even to-day the mountain sheep may be found in abundance in British Columbia and Alaska, but it will save trouble perhaps if I put it in this way.

In Colorado, California, Montana, Nevada, New Mexico, North Dakota, Utah, and Arizona, it is illegal to kill mountain sheep at all, although, in Colorado at any rate, they are very plentiful.

In Wyoming, Washington, Oregon, Idaho, South Dakota, Alaska, British Columbia, and the North-West Territories there are sheep, and you are allowed to kill them under certain restrictions as to close time and numbers, which are reasonable; but in Oregon, Wyoming, and South Dakota the unfortunate non-resident has also to take with him a "qualified guide," who is supposed to stick to his heels and make his hunting a misery. My advice is to avoid these States.

Incidentally I may be permitted here to remind sportsmen that in most of the provinces of Canada and of the States of the Union, there is not only a close time for each kind of big game, but a limit as to the number of beasts which may be killed, and a license to be paid by non-residents for the privilege of hunting in the district. As a matter of fact the license is very often not demanded, but it should be paid without demand in the interests of those who

want the game laws enforced ; but any flagrant violation of the game law, in British Columbia at any rate, is extremely likely to bring a hornets' nest of angry local sportsmen about the offender's head. Let our ewes alone, brother sportsmen, or the man who was your best friend at the club at Victoria will run you in to a certainty before you can get out of the country.

In the old days the big-horn was *the* mountain sheep ; to-day he is only *Ovis montana*, and there are at least six other varieties of sheep known on this continent to naturalists. Be these things as they may, the habits of the sheep are much the same in all countries. They feed early and late, and from ten to four in autumn take a siesta. That is the time to use your glasses with care. An Indian I once hunted with was an all-day traveller, and the pace he went at was intended to kill any white man. For the two or three days before I had sickened him of this game, he used to jump more sheep in a day than I cared to see in a week. Great white discs (sheep sterns) bobbing over the next sky-line do not add materially to a hunter's happiness.

In sheep-hunting, the man who has served his apprenticeship as a deerstalker in Scotland will show to greater advantage than in any other sport of North America ; and to such an one I should say, only take your Indian with you to pack home your game. Trust your own knowledge of wind, your own eyes, and your own judgment ; get into new ground if you can in the morning, hide your camp away in a

hollow, and, especially on the first day in, keep your men quiet in camp.

Sheep are incessantly on the watch. Rams may doze when there are ewes with them ; but they are sufficiently watchful when alone, and there is no need for them to watch when their wives are about. Every sense which sheep possess is as keen as it can be, and all their surroundings work for their protection. They know what the squirrel is chattering about as you pass through the edge of the timber to the downs where they are feeding. The winds which twist and turn in the high places and amongst the rounded hill-tops are their sentinels ; the hills themselves possess acoustic properties invaluable to the sheep, to whom the ring of an axe means as much as a rifle shot. And when in the dim dawn you look from your breakfast fire to the sky-line, don't think for one moment that the figures outlined upon it are more visible to you than you are to them. You may get a sheep that day, but not one of those sheep.

Let me tell you anything else I have to say in a story.

I had been crowded out of a country in which there were a good many sheep and in which to-day I am told there are the sites of innumerable camps, and I lay disconsolately listening to the reports of many rifles. In the distance was a noble, round-topped mountain which looked "bald" enough to carry good feed, and therefore presumably sheep, but my Indian said that there was no way to it for pack-horses, that we could not get through to the timber-line,

and that it was no good, and therefore Indians never hunted there. I knew something of Indians, and translated this to mean that he thought the place no good *because* Indians never hunted there. Before dawn of the next day we had three tired men and a very battered pack-horse with us; we had scrambled and dragged that unfortunate quadruped up places which assuredly were never meant for horses; but we were close to timber-line and we had not, so far, seen a trace of man. But the first glimpse at the open country beyond the fringe of whitened skeletons of trees showed us sheep, feeding slowly up to the grounds where they passed their mid-day hours undisturbed, and an hour later we reached a rim rock, with a long ledge just on the other side of the sky-line, a ledge sheltered by a few stunted and crawling juniper bushes, which would have told our nostrils whose favourite lair it was, even if our eyes had been too blind to see the tracks and droppings and a little hair on the rocks. A second glance made us drop like stones, and lie still with our hearts in our mouths. The tenants of the ledge were standing as still as carven images, about 300 yards below us, trying to find out what that confounded old ewe was staring at. They had not seen us, neither had she, but she had a suspicion that the outline of that juniper bush was not quite what it ought to be. One of our heads had blocked a space through which the sky-line should have been visible. We waited half an hour, I should think, whilst those beasts stared at us, and at last, just when my neck

was going to crack with the constraint of the position, one of the rams put down his head for a bite at the grass under his nose.

But his head came up again almost before taking the bite, and he stood staring again as rigidly as ever. This was the beginning of the end. After the first move it was not long before several of them had their heads down, and then at last the ewe *thawed*, and, relapsing into a living brute, turned to one side and moved off, followed almost at once by the rest of the band. With a rush we went back across the top, and, sliding on our quarters, came down on a ledge which ran round the top, just in time to meet the whole party on its way round the top.

The first shot killed the second best ram of the band, and the second laid that confounded old ewe on her back with her legs in the air.

I wanted one specimen of a ewe (though a ewe's horns are miserable appendages for the mate of the big-horn), and I owed that ewe something for the half-hour's pain she gave me.

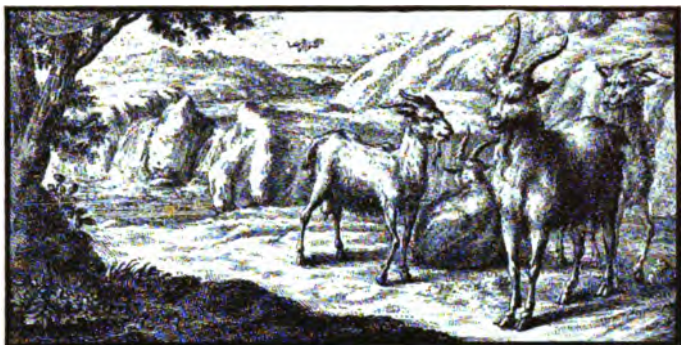
She is the only ewe I ever shot.

As some guide to the difference between a ewe's horns and a ram's, hers measure to-day (shrunk a little, no doubt) $9\frac{1}{2}$ by 5 inches. I killed another good ram that day and might have killed two more, which were spared because they did not appear bigger than those I had killed already. If I remember rightly, I saw over a dozen good heads next day, though nothing exceptional, and we left on the third day because we could find no good

water, and the only possible camping-ground was phenomenally miserable for that part of the country.

That was why the Indians did not hunt there, and the moral of the story is that when a known hunting-ground appears to be shot out, don't leave the country, but try the next range. The beasts have not been killed out. That rarely happens. They have been driven back, and *it is the pioneer who breaks his way into new ranges who gets the game.*





CHAPTER XV

OVIS DALLI

By A. S. REED

THERE are now, on the continent of North America, according to the New York Zoological Society, no fewer than six different varieties of mountain sheep, namely, the *Ovis montana*, *Ovis stonei*, *Ovis fannini*, *Ovis dalli*, *Ovis nelsoni*, and *Ovis mexicanus*. The *Ovis montana*, commonly known as the big-horn, is by far the best known of any of these. He has, I should say, been known for a period extending well over a hundred years. He ranges, practically, all through the Rocky Mountains as far south as the State of Colorado, and as far north as the head of the Liard river, in the North-West Territories of Canada. So far as trophies go, none of the other varieties have, up to the present time, been able to reach the horn measurements of the *Ovis montana* by some inches. Neither do they carry their size or weight, so to

speaking, like the Montana sheep, but begin, on the other hand, to taper off almost from the very base of the horn. There is no finer trophy to be got on the American continent, in my opinion, than one of those really heavy heads of the *Ovis montana*, seldom, if ever, seen, except in the collection of those who were fortunate enough to hunt this splendid animal in earlier days. Mr. W. T. Hornaday, in his *Notes on Mountain Sheep of North America*, mentions the largest recorded head as being one of $18\frac{1}{2}$ inches. Mr. Fannin, curator of the Provincial Museum in Victoria, B.C., informs me that he set up one some years ago that measured 18 inches. The two largest that I have seen myself go between $17\frac{1}{4}$ and $17\frac{1}{2}$ inches. In setting up these heads the hole in the horn ought to be filled up with a well-fitted piece of seasoned wood, cement, or some other substance, otherwise, after being kept for some time in a dry room, the horn will shrink as much as an inch or more. It would be almost out of the question to expect to obtain heads of the size of those above mentioned at the present day, but of course there is always the off-chance. Mr. James M'Kay, of East Kootenay, killed one only last year which measured $17\frac{1}{4}$ inches. But the man who, after putting in a couple of months' hard work, can point to two or three heads which will measure, fairly, anything over 16 inches, may consider himself very fortunate.

The *Ovis stonoi*, although only named in 1897, is not a discovery of recent years, having been known and recognised for the last twenty-five years at least

as the ordinary *Ovis montana*, until in the year 1896 a man sent out by the New York Museum to hunt in Canadian territory killed a few of these sheep on the Stikeen river within a few miles of Telegraph Creek. They were pronounced to be a new variety by Dr. Allen of the American Museum of Natural History in 1897, and called *stonei*. Their range is supposed to be confined to a comparatively small area, chiefly in the mountains of the district of Cassiar, B.C. They are said to be smaller and darker in colour than the *Ovis montana*, and with more spreading horns. So far as the colour goes, I do not consider that that counts for much, as these mountain sheep vary so much in this respect according to the time of year when they are killed, and also with respect to the age of the animal and the particular locality in which they range, and according to the condition which they are in, facts which are well known to any one who has hunted these sheep at all times of the year. Even sheep in the same band and at the same time of year vary considerably as to colour very frequently. As an example, I may mention that on one occasion, while hunting sheep in September at the head of the Muddy river in Cassiar, we were sitting down eating lunch, when three sheep passed along the opposite side of the hill not very far from us. Two of these were fairly light in colour, but the third seemed to be almost black, so great was the contrast. Yet this is only one example out of many that might be cited. The horns undoubtedly carry a great spread, but the horns of the *Ovis montana* which inhabit the ranges

of the Pacific Coast have, as a rule, a much greater spread than those which range in the Rocky Mountains proper. In fact, I am very much inclined to think that these latter are as much a variety as the *stonei*. The best specimen, and rather an exaggerated one, of the horns of this sheep belongs to Mr. Robson, of the Hudson's Bay Company, and was set up by Messrs. Foster and Lindley, taxidermists in Victoria. It measures $14\frac{1}{4}$ inches in circumference, with a spread of $28\frac{3}{4}$ inches. This head, when compared with the photographs of those from the main range of the Rocky Mountains, would undoubtedly be pronounced to belong to a different animal by the casual observer, but when it is put beside that of the sheep inhabiting the coast ranges, the difference is not quite so apparent. The spread of this head is $25\frac{1}{2}$ inches, which runs the other pretty close.

The *Ovis fannini*.—The specimen from which this sheep was named was brought out from Dawson City, Y.T., in 1900, and presented to the Victoria Museum, where it was seen by Mr. Hornaday of the New York Zoological Society, and pronounced to be a new variety. It was named *fannini* after Mr. J. Fannin, curator of the museum. In appearance it may be said to be partly white and partly of a bluish grey. The head, neck, breast, rump, and belly are white. The back, sides, upper parts of the legs, and the front of both fore and hind legs are of a bluish-grey tint, caused by about an equal mixture of black and white hairs. This is undoubtedly a very handsome and striking-looking sheep. The colour-

ing is not distinctly defined, but rather merges gradually from the dark into pure white. The specimen is not a very good one, the head being small. However, the more one looks at it the more one admires it.

The sheep range through a fringe of country, so to speak, inhabited, on the one side, by the pure white *Ovis dalli*, and on the other by the *Ovis montana*. I am quite convinced in my own mind, and I know of many other hunters who have expressed the same opinion, that this sheep is nothing more or less than a cross between the *dalli* and *montana*. A friend of mine, who has done a lot of sheep-hunting in the Atlin district, and also in other parts of British Columbia, informs me that in the Atlin country he has seen the *dalli*, the *montana*, and the *fannini* all together in the same band. I believe that this was the first and only sheep of the kind that Mr. Hornaday had ever seen at the time when he pronounced it to be a new variety, and I feel almost certain that if he had seen the numerous and varying specimens that have been brought out since then, he would have hesitated before expressing that opinion. This particular specimen is nearly half white, but others vary in colour to such a degree that the darkest ones may be termed brown sheep with a scattering of white hairs through them, so great is the contrast between them. The latter type is, however, so far as I have seen, by far the most common.

The *Ovis nelsoni* ranges through Southern and

Lower California. It is said to be smaller and lighter in colour than the *Ovis montana*.

The *Ovis mexicanus* is a native of Mexico, larger and darker in colour than the *nelsoni*. I have not seen either of these two sheep, and so prefer not to express any opinion with regard to them.

The *Ovis dalli*, the pure white sheep of Alaska and the North-West Territories of Canada, may be said to range, roughly, through all that country north of the 60th parallel of north latitude and west of the 125th meridian of west longitude, a country in extent almost as large as that inhabited by the *Ovis montana*.

I do not know when these white sheep were first brought out and named, but they have, there is no doubt, been known to the Indians and to the servants of the Hudson's Bay Company in the Mackenzie river district for very many years. I remember once, some years ago, Mr. M'Dougal, who was in charge of a post for the above-named Company at the mouth of Peel river, telling me that there were ibex in that country, and at the head of the Porcupine river. He no doubt referred to these sheep. The first intimation that I ever received that there were white sheep in the north was when reading an account of a trip made up the Porcupine river, which flows into the Yukon at Fort Yukon, by Mr. W. Ogilvie, in connection with some surveys made under the direction of the late Dr. Dawson for the Dominion Government. In this he mentions

that an Indian who had gone out to hunt for meat for the party returned with a white, or partly white, sheep, which he concluded was the ordinary mountain sheep, which had changed its coat to white for the winter, as other animals do in these northern climes. I read this report in 1892. In 1894 I was wintering in Cassiar, on the Liard river, when a band of strange Indians came in with furs to a little trading post situated at the mouth of the Muddy or Black river, all clothed in white sheep-skins. They told us that they belonged to the Nahani river, which flows into the Mackenzie. Their usual trading post was at one of the Hudson's Bay Company's stores on that river. This shows that the Hudson's Bay people must have known of their existence through that country.

In 1895 Mr. Warburton Pike made a trip after them, starting north from the junction of the Dease and Liard rivers, but failed to get any owing to the fact, I believe, that after travelling about 200 miles his Indians refused to go on any farther, and so of course he was obliged to return. The first head that I ever saw was one shown to me by the late Captain Garforth of H.M.S. *Pheasant*, which head he bought in Sitka. The coat of this sheep varies to some degree in the matter of colour according to the time of year when it is killed. In the latter part of the winter it is pure white, but it is very easily stained, and once discoloured it is almost impossible to remove the foreign matter and restore it to its original whiteness. They are all, during the summer months, more or less discoloured, and if the skins were judged from

samples taken in their summer coat they would be best described as being of a dirty white hue. This is due to the fact that the colour and texture of the coat are so delicate that the mere action of lying on the bare ground, or in wet places, is quite sufficient to stain the hair. Some are simply dirty white, others are of a rusty tint, according to the nature of the rocks in the country which the sheep mostly frequent at this time of year. The coat is also quite short in the summer months, whereas in the winter time it is quite long. I killed my first *Ovis dalli* about the first week in September, and was very much disappointed in finding it to be quite short in the coat, and of a dirty rusty colour, instead of the pure white that I had expected it to be. I at once determined that I would wait until the snow was on the ground before killing any more. Accordingly I left the mountains next day, returning to the lower ground, where I put in the time hunting moose until late in October, by which time I thought that the skins would be in better condition. There is one other peculiarity with regard to the coat of this sheep—they all have a few black hairs in the end of the tail. You might see a hundred skins and never notice them, but if you will take the trouble to part the hairs on the end of the tail you will find them there. These were the only black hairs that I was able to discover after examining thoroughly the eleven sheep that I eventually killed. The horns of the rams, more especially those of the younger ones, are of an almost transparent amber in colour, but the older



RECORD HEAD—OVIS DALLI.



RECORD HEAD—OVIS STONEI.

A black and white photograph showing a steep, snow-covered mountain slope on the left. The snow is uneven, with dark patches of rock or vegetation visible. In the foreground, a small boat with several people on board is on the water. The background is a bright, hazy sky.

PACK HORSES CROSSING A GLACIER.

ones are generally darker, and all of them, after being kept for some time, become just like those of the other varieties. Most of mine have turned quite black. They are comparatively small and rather uniform in shape, with the exception that they vary to some extent in the matter of spread, some of them being quite compact like the general run of the *montana* which inhabit the Rocky Mountains proper, while others spread out considerably, more like those of the *montana* which are found on the coast ranges. The greatest spread that I know of is one of 26 inches, which almost equals the *stonei* head. We found some old heads with the points worn down or broken off, as the case may be, but as a general rule they are intact. Lastly, there is one other marked difference between the horns of this variety and those of any other that I know of. The crown or upper surface of the horn projects or overlaps the lower portion, as it were, in such a manner as to form a ridge running for some distance from the base, or that portion nearest to the head, gradually tapering off until at the distance of from 6 to 8 inches from the skull it ceases to be apparent. This is most noticeable, and I detected it and remarked upon it instantly on being shown the first horns that I ever saw. I have since examined many heads and found them to be alike in this respect. It is a great pity that they do not compare more favourably, with regard to measurements, with our old friend the big-horn. But I feel quite certain that there are much better heads to be got than any that have been brought out yet, and in the course of

a few years, when the high mountain ranges in the interior of Alaska have been explored, we shall see some of these heads measuring as much as 16 inches at any rate. The best head that I know of is the property of Mr. F. Foster, taxidermist, of Victoria, B.C. This head was killed in the vicinity of Lake le Barge, B.C. It measures $15\frac{1}{2}$ inches in circumference and $43\frac{1}{2}$ round the outer curve of the horn, with a spread at the points of 26 inches. This, no doubt, is a very fine head.

On returning to the mountains towards the end of October there was from a foot to eighteen inches of snow on the ground, and after a month's hard work I succeeded in getting some very good specimens. Their coats were quite a good length and were also quite clean. They are, however, even better later on, and I should prefer hunting them in February or the beginning of March, were I to go after them again. It is necessary to be very careful when skinning these sheep, as a drop of blood will leave its mark. Even when washed off immediately it will leave a stain almost similar in character to the rusty colour in the summer coat referred to before.

We saw lots of sheep, but the older ones were very shy and kept well up, always taking care to have bands of ewes and lambs and younger rams before them. This may be attributed to the fact that the older sheep prefer the higher ranges, while the younger ones wander on down to the lower ground, rather than to any trait of sagacity on their part; but I am inclined to think otherwise. A heavy fall

of snow will drive them down to the lower ground to feed, but they will generally return again to lie down, and after the wind has blown the snow off the high peaks they will remain there.

When we were hunting in the snow, the walking was always much easier after getting to the foothills, as we would then as a general rule get on to a sheep trail leading from the lower to the high ground, which was beaten down and frozen hard.

Sheep are, under ordinary conditions, the most restless of all wild animals, as any one who has had the opportunity of watching them much well knows. Even when lying down they never remain in one position for any length of time. First one and then another will get up, at short intervals, either to look round, or perhaps oftener to scratch at its bed in order to make it more comfortable. When most other animals lie down you can generally depend upon them staying there quietly for some time at any rate. For this reason alone it is, as a general rule, best to approach sheep when they are feeding. I do not think, however, that it is necessary here to write a long and elaborate account with regard to the habits of the *Ovis dalli*. They are in all respects, even down to the matter of food, exactly similar in habit to other varieties of wild sheep. Those who have hunted the *Ovis montana* know all about the ways of these sheep, and those who have not can easily find out by referring to one of the many books that have been written on the subject. The difference is simply one of colour.

In the middle of November we were camped in a valley in the last patch of timber. There was about two feet of snow on the ground, and it was about 15° below zero. On the north side the bottom of the valley between us and the next mountain was filled by a glacier some half-mile in width. On the south we were cut off from the adjacent mountains by a deep cañon, through which flowed a rapid mountain stream some twenty feet in breadth, across which we had felled the last solitary tree, so as to form a bridge. The banks on both sides of this cañon were very steep, and covered by a thick growth of willows. There was a sort of trail, going down into the cañon, on our camp side, but going up the other you had to force your way through the tangled willows as best you could. Both these side-hills were very slippery.

For the last two weeks we had begun and ended each day, with one or two exceptions, by climbing up and down this cañon ; generally, on the return trip, with packs of meat or horns, the points of which would catch in nearly every branch in a most aggravating manner ; and often after dark, when thoroughly tired out from wading through the snow, and climbing all day long. From the top of the farther bench, it was perhaps a mile and a half to the foot of a conical-shaped mountain, on the top of which we could distinctly see, every day, at daylight, against the sky-line, before having left our camp many hundred yards, a solitary sentinel in the form of a sheep. He would remain there for ten or

fifteen minutes at a time standing quite motionless, and would then disappear, probably to feed; re-appearing again at the end of a short interval. I do not mean to say that it is always the same sheep that remains on guard—they take it in turns. One sheep watches while the others feed; when he gets tired, he returns to the band and begins to feed, when another goes and takes his place. I do not think that when they are left unmolested they invariably take these precautions, because often, on the first day or two that you get into a new country, you manage to kill the first sheep or two without much trouble, unless they may have been annoyed by wolves, which is frequently the case. On this particular day we determined to try and get the sheep we had seen, or more correctly one of the band which we supposed to be there. He had undoubtedly seen us after we left our camp and before we went down into the cañon.

We made a long detour, finally arriving in the course of an hour or two at the foot of the mountain, without having been seen, as far as we could tell, during that time. We then climbed straight up the face of the mountain, so that if the sheep should still happen to be there, we should be able to get fairly close to them before they could see us. On arriving at the top, after a good steep climb, of course there were no sheep, but about a quarter of a mile off, going along a side hill, we saw a band of about a dozen or fifteen, amongst which we could easily distinguish about six old rams. These were what we

wanted, and so we kept on for the next few hours trying every dodge that we could think of to circumvent them, but without any success, and at the end of that time we were rather farther off than when we started. Once we were nearly successful. They had disappeared over a ridge, and by running we had got to within a hundred and fifty yards of the top, and felt almost sure of getting a shot at them when suddenly we saw the head of an old ram show over the crest. He had come back to see if we were still following. They trotted on for about a mile after this and then stopped to feed again, but on this occasion one of them remained on guard. We watched them for some time through glasses. They were feeding quietly, slowly drawing towards the foot of one of the highest mountains until they all disappeared from view, with the exception of one which would return occasionally and watch. Finally this one also went on and did not return. At the end of about another half-hour, as he did not show himself again, we concluded that we would make another effort to get at them. It is miserable work, this waiting, especially when it is wet, or really cold, as was the case in this particular instance. We had now been chasing these sheep for hours, and were wet through with perspiration and snow, and yet our only chance of getting a shot at them in the end was by sitting quietly down out of sight and leading them to suppose that we had gone away. Van Dyke in his *Still Hunter*, which, by the way, is by far the best book on hunting that I ever came across, says that

"Patience is the cardinal virtue of the still hunter." This no doubt is quite true, but under some circumstances it is rather trying. We were quite stiff and half frozen when we started again, making a wide circle to the left and taking every precaution to keep well out of sight, going down gullies that took us far out of our way, and crawling behind any rising ground which might be available as covert.

The final stage of a still hunt is in most cases intensely exciting. Everything depends upon these last few moments, when often the slightest mistake will spoil the work of a long and arduous day. This is the time when the hunter requires to have all his wits about him, and a time at which, until he has had a good deal of experience, he is almost certain to make one or other of the numerous errors which it is so easy to fall into, and any one of which is sufficient to startle and cause him to lose the prize which was so nearly within his grasp. On that afternoon when I crawled inch by inch over the last ridge, pushing a full-cocked rifle before me, all the old feelings that I experienced on the day that I shot my first deer returned almost to the same degree, but on this occasion under better control, with the exception of one—the anxiety to shoot. When the rifle was at my shoulder and pointed on the best ram in that little band feeding quietly and unsuspiciously at a distance of not more than eighty paces, any one who happened to be there might, as far as I was concerned, have pressed the trigger. That ram never moved a foot. The others divided up into three

bands and ran away, but not before, after a good deal of shooting, two more of the most beautiful animals I ever saw remained to keep him company. By the time we had skinned these sheep and cached the meat in the snow it was getting dusk and was almost dark before we had got to the foot of the mountains. We had then still three or four miles to go to camp, up and down hill, crossing half-frozen creeks, down some very steep pitches, and through thick patches of tangled willows, added to which we were packing the scalps and horns.

The long walk back to camp after a hard day is under any circumstances rather weary work. After the intense excitement comes the relapse. You realise then what you have gone through, and begin to wonder whether it is good enough. I have sworn many a time that I would never go out again, generally after a long and unsuccessful day on snow-shoes after moose ; but after a good feed, a pipe, and a good sleep one is ready and anxious to get at it again. I was very tired when we got back to camp about nine that night, after slipping, floundering about, and falling in the snow and dark, and I never remember a more welcome sight than that of the camp-fire when we first caught a glimpse of it through the trees about half a mile in the distance. This is a typical example of a successful day.

In conclusion, I may add that I do not profess to be a naturalist. All I know I have learned by hard work in the woods, and up to the present I have

been careful to leave the pen alone. If, therefore, my experience in the mountains differs in some degree from that of those whose business it is to write, the fault, I hope, is not altogether on my side. I make the above remarks for what they are worth.





CHAPTER XVI

BEARS

By CLIVE PHILLIPPS-WOLLEY

THE bear is to America what the tiger is to India and the lion to Africa.

He is the incarnate terror of the woods, and although I cannot endorse all the stories of his ferocity or even of his astounding vitality, I can sympathise with and understand the feelings that he has inspired.

It is not the beast but the beast's surroundings which cause the effect.

Take the greatest and the grimmest grizzly that was ever born where the snow-slides are in a chaos of granite rock and tangled deadfall, and place him

in an English ploughed field, and I doubt whether he would arouse more fear than ridicule.

There he would be plainly seen, an unwieldy grunting lout ; but let him be but dimly discerned between the great pines of the foot-hills when the dark is coming down, or when the shadows are creeping back into the forest in the uncertain light of dawn ; let him be seen when absolute silence reigns ; when the lonesomeness of the waste places has fast hold on the man's heart, and the fear of the greater things, mountains and forests, and an unsympathetic nature has daunted him ; when camp is still far away, and the direction of it uncertain ; when the rifle's sights are hard to see, and the hunter's waning strength is tried to breaking-point by the unseen enemies which hold him back and trip him as he goes ; let the bear be seen moving silent as a shadow over the soft pine needles, and then a man's imagination may be forgiven if it enlarges the beast's outlines and concentrates in the grizzly all the savagery and cruelty that surrounds him.

It is annoying when you have shot him to find how abominably good-natured he looks in spite of all the art of the taxidermist.

Since I last wrote of the bear I have come across a good many additional instances in which he has shown some of the ferocity attributed to him, and I have no doubt that it is true that, in the earlier days before the beast had been taught the deadly efficacy of firearms, he was a much uglier customer to meet with, but his "kills" are generally Indian women

caught berry-picking, or men who have wounded him with a weapon too light for such heavy game. The worst stories of him seem always to come from the new grounds in which men are still strangers, but even there he does not live up to his traditions.

My friend Mr. A. S. Reed, who has brought back from the north some of the most gigantic skins I have seen, tells of one beast in a dense willow thicket in the half dark, which snarled savagely and seemed disinclined to budge, but as the man insisted, the bear went out and did not even turn when the .303 began to talk to him.

So it is generally except with bar-room stories, though now and again the old savage turns and shows how equally unreliable most of those stories must be in which men pitted themselves and their knives against his huge rending claws at close quarters.

Given a cool man armed with a No. 12 Paradox, and I will back him to come off scot free in an encounter with the biggest bear in the world ninety-nine times out of a hundred, but I look upon the men who tackle *Ursus ferox* with light rifles as either heroes or lunatics. The grizzly undoubtedly takes a lot of killing. I remember myself a case in which five fairly well planted bullets from a 50.110 Winchester failed to finish a bear, though the hunter was able after that to walk up and blow his brains out. On the other hand I have seen a full-grown grizzly caught in a noose of half-inch cotton rope and strangled to death.

Again, as a contrast to this, I remember upon the



A DEAD CANADIAN GRIZZLY BEAR

TO VINU
AUBROTHIAO



A BRITISH COLUMBIAN BEAR

same river (the Stickeen) we had seen a great deal of certain vast tracks in which a man could put both feet in gum boots, and had failed to catch sight of the maker of them.

Before we left that piece of country, the Indians made a house-trap and roofed it in with logs which required the skill as well as the strength of three men to put into position. On the top of these were piled the biggest boulders which could be got up by using skids, and as many of them as the roof would hold. We came back a week later. The trap had been visited and had caught its visitor, but the trap itself looked as if a box of giant powder had been fired inside it. The bear had walked out as if our structure had been made of gauze.

Of the bear's vast strength I can believe almost anything. I am prepared to believe that a skin I measured myself last year, though it measured 10 feet 4 inches, is a long way from being the largest that we shall see from the far north in the next few years, but of the bear's abnormal ferocity I have very grave doubts.

I have always found bears more anxious to get away than suited my convenience. I have more than once known she-bears (grizzly) leave their cubs to be killed whilst the mothers saved their skins, and I do not know a single reliable hunter who has himself been the hero of a "bear story," unless it be an old guide of mine in Colorado, who ran into a poisoned grizzly in thick green timber, and was rather badly bitten but left in possession of the field. On

the other hand, there is an instance in the Duncans district of British Columbia of an old Welsh farmer who actually kicked a black bear off his favourite spaniel ; but then black bears are not grizzlies, and Welsh farmers' boots are no bagatelles.

There is an element of danger in bear shooting : men have been killed by them and will be again, I suppose, and therefore there is just enough excitement in the game to make it worth while, but that is all I am prepared to admit, though I remember quaking in my shoes one night when I had been caught in the dark and was camping under an upturned log which apparently lay in the beat of a certain bear whose tracks I had been following.

I heard him pass me twice in the dark, and I knew by his snort that he was aware of my presence, but he did not attempt to molest me, though in the rainy darkness I was entirely at his mercy.

Now (the beginning of May) is the time to go bear shooting.

A steam launch, if I had one, would take me from my island in a few days across the Gulf of Georgia, and up one of the innumerable inlets with which the west coast of the British Columbia mainland is indented. Most of these are practically unhunted, and in all of them are unnumbered rock-slides. On these the young green grass just now is springing up, and the white olali blossoms are making them beautiful as the sun makes them pleasant places in which to dream away a day.

In the dark timber which surrounds them, there

are bears black and grizzly, who have just wakened up from a long winter sleep, their appetites sharpened and their coats still unimpaired. In the very early morning and just before dusk, and in very quiet places even at mid-day, these gaunt beasts come out upon the rock-slides to feed and sun themselves.

This is the opportunity of the patient man, who knows that he will get more game by waiting for it to come to him than by trying to go to it, but if you try this game, don't shoot at a bear directly above you, unless you are certain of killing clean, as a wounded bear will almost invariably come downhill, and might run into you on his way down. It is just under such circumstances as these that a man might be mauled, although I know a case in the Kootenays in which a man went down a slide in this way with a bear, and escaped with nothing worse than a bad fright. The bear went one way and he the other with equal rapidity when they reached a stopping-place.

Later on in the year, the bears will be out on the sandy river-bars, and later still in the great berry patches on the hill-sides, and in the river-bottoms. At the end of this month and in the early days of June, according to elevation and climate, they will be feeding on the yellow shoots of the skunk cabbage and scratching up various bulbs, and towards the beginning of autumn they will all be gathered about the streams where the salmon crowd the waters and die by thousands. But after the end of May in the low-lying countries their hides begin to lose their

value ; the hair comes out and they become as bald as old portmanteaux. They only just recover their condition before it is time to "hole up" again for the winter, and on our northern rivers a man has to keep one eye on the bears and another on the river, or he may find himself frozen in till Christmas.

If you could only find a place in which bears were plentiful, and from which you could walk or ride out at your pleasure, the last week of October would be the very best time to hunt bears in the north, but unfortunately most of the travel there has to be done in a boat. Ice, which comes in October, stops boating.

So far I have managed to avoid the great question of varieties, but I suppose that I must face it. Like every other beast nowadays, the bear is suffering from multiplication of species. For the hunter there are still the big grey or brown bear, sometimes silver tipped, which he knows as grizzly ; the milder-mannered black beast with long shallow head, rooting in swamps and living on fish and berries ; and in the far north the polar, with an infinite number of crosses or slight varieties for which there are many local names ; but it seems likely that many fairly distinct subspecies will shortly be added to our list by the naturalists.

As I believe that one of the best-known naturalists in America is at present at work upon this subject it may be as well to wait until he has pronounced finally upon it, merely suggesting in the meanwhile that the typical grizzly of America and of British

Columbia seems a smaller and more savage beast than the great Barren Ground bear (*Ursus richardsonii*) of Alaska, and that at least two very distinct varieties, until lately unrecognised by science, seem to exist in our far north. Of one of these Mr. W. H. Dall wrote, in 1895, that its range was about the Mount St. Elias glaciers, especially near Yacutat—that its general colour resembled that of the silver fox—that it was of moderate size, the largest skins not exceeding six feet in length—that it was shy and less fierce than either the black or brown bear—that it had short, sharp very much curved claws for tree climbing—that it was known as the blue or glacier bear,—and he suggested that it should be known as *U. emmonsii*.

I have myself seen several skins, and although I don't attach much weight to the colour of a bear skin, those I saw were strikingly unlike any other skins seen by me, not only in their colour, but in the remarkable softness of the fur.

The other variety to which I refer is still almost legendary, but the story of a small white bear which occurs about the southern coasts of Alaska is very often repeated, and I have myself seen a good many white bear pelts which were not in my opinion those of polar bears. There is still a chance for the adventurous hunter to add a new beast to the list in Alaska, and name it in his own name if he be so minded.

In choosing a sketch of bear-hunting for this article I am in doubt as to where to pitch my story. My old note-books show such a variety of environ-

ment that I am uncertain which is most typical. There was a morning when the October frosts had fringed all the oval evergreen leaves of the coral-berried kannick-kannick, and made the golden grass and dry, light soil of the hogsbacks a delicate grey, in which the deer and the bear had written the record of their night walking.

We might kill a grizzly feeding on those berries, where the silence of nature is only broken by a sound as of the finest rain, the falling needles of the golden tamarak, or we might go up into the black bull pine country, where a man feels like an ant crawling through a wheat field, so small is he compared with the crowding timber,—a gloomy country, terribly broken, with a black sky above, and a southing wind to swing the pines slowly and sift through them the first snows of winter; but perhaps the most typical locality would be on the head-waters of a tributary of the Stickeen river, where the surrounding bush is too thick to push through, is interspersed with venomous devils'-club, and dominated by heavily timbered hills, broken here and there by gigantic ice-fields.

The main road through this country is a broad turgid river with great shifting sand-bars, upon which little groups of men wash from time to time for the yellow stuff they love, taking away perhaps a small bottleful of it after months of work.

Here one night an Indian and myself found ourselves the only two moving creatures. For awhile we waited, so still that we too might have grown up in

this place of eternal patience, but as no bears came and the moon had risen we decided to explore the mud flat which stretched for nearly a mile back into the forest.

But for the popping of the equisetum under our feet all was absolute silence ; there was no wind to sway the trees, no live thing to rustle in the brush ; but all at once before us there were four great tracks, big enough for a man to stand in with both feet, the tracks of the two fore-feet turned inwards, and in places overlapping each other. They had been made perhaps half an hour, and both of us could build on them with ease the great slouching form that had made them.

Then we went even more cautiously than ever, until from a bush-fringed trickle that went through the mud flat to the main stream, another set of tracks came up to join the first, and the two went on together side by side seeking what they might devour.

About this time the ghostliness of the moonlight affected my Indian's nerves, so that he remembered a trap he had set *on the way back to camp*, a trap which must be visited before we left next morning, and an added sense of loneliness touched me when I saw him disappear and found myself the sole visible tenant of that white patch amongst the pines, with *three* sets of tracks leading me on.

When a fourth beast came out of a brushy gully and joined himself to the others, the urgency of an early return to camp pleaded against the folly of coming hundreds of miles to hunt bears which you

dared not follow when you had found them in plenty. There was water oozing into the fresh footprints, mud still crumbling where they went down a little bank, marks where the drops had fallen off the bears' long coats which shook as they moved, and behind one of the clumps of indistinct bushes between me and the dense gloom of the pines in which my mud flat ended, there were my four bears waiting for me to kill them, or——

Well, I am not paid to lie, and having drawn my picture, and added for my own sake that in spite of a rather noisy heart I honestly beat out that confounded moonlit swamp, I am going to leave this story like the story of the Lady and the Tiger.

You can finish it if you like with charging bears all teeth and claws, and a wonderfully unperturbed sportsman, whose photograph I can supply, in fringed buckskin coat, dropping grizzlies with single shots between their eyes (how I should like to see that done), or if you want to be realistic, you can draw a figure crouched behind a bush, startle the silence with a rifle shot and the short snarl of a bear that snaps at his own side, lurches a few yards, and then rolls over, a nasty job for the successful hunter who has to skin him.

[With this, and with some additional remarks on the big bears of Alaska, the account of the shooting of the Ursidae is completed, and if any sportsman feels inclined to complain that no special notice is taken of the shooting of bears in Asia, beyond a short chapter on the sloth bear, or even in Europe,



BRINGING HOME THE BEARSKIN.

NO. 1000
EXHIBIT 100

he may be fully satisfied that all the most interesting and important shooting of bears is typified by their shooting on the North American continent. These bears are incomparably the largest and the most formidable of their kind, although the writers have not gone out of the way to embroider their simple accounts with any hairbreadth 'scapes or blood-curdling adventures.—ED.]





CHAPTER XVII

MUSK OX

By **WARBURTON PIKE**

IN the northern part of the Dominion of Canada lies a stretch of country, great in area but little travelled, known as the Barren Ground. It extends from Hudson's Bay to the Mackenzie river, and comprises all the shore-line of the Arctic Sea between these two boundaries. Its name is ominous, and its past history has been a long record of hardship and privation, but a stranger venturing on a first visit during the summer months may very naturally conclude that the country has been maligned, and the

severity of the climate exaggerated. He will find a rather pleasant land teeming with animals, birds, and fish, with low rounded hills covered with bright green grass, a variety of mosses, and a wealth of simple, modest flowers. Chains of lakes and connecting streams form convenient waterways for a canoe, the everlasting daylight makes travelling and camp work easy, while there is always fuel enough for summer to be found in the small willow bushes, or at worst the black moss which grows in profusion anywhere. It is not a land attractive to the man of commerce, but to the naturalist it is full of charm. It is one of the world's great breeding-grounds for a variety of water-fowl and waders ; there is a continual cry of loons, plovers, gulls, skuas, ptarmigans, and ravens, and the profusion of bird life is scarcely credible. The caribou are wandering out towards the sea coast, attended by their parasites the wolves and wolverines ; the Arctic hare is plentiful and easily detected in contrast to the bare ground, and the big trout lie at the foot of any rapid, so the traveller need take no thought for the morrow, but can live on the fat of the land according to his pleasure.

But the stranger will also notice that the snow lies late in the shady places, that the ice does not disappear from the lakes till the month of July, and that he cannot push a stick more than a few inches into a muskeg without striking the ice eternal. Above all, if he be observant, he will notice the perpetual hurry that governs all the birds and animals which seek a summer's refuge in the Barren Ground. The

very spirit of the country seems to say, "What you do, do quickly, for the summer is passing and you cannot stay long." The mosquitoes bite hard and viciously without waste of time, as if they realised that their time was all too short for carrying out Nature's great command, "Fill your belly, lay eggs, and die." It frequently happens that the young of the water-fowl are frozen into the early autumn ice before they are strong enough to fly, and ripe berries are covered by the snow before they can fall, to appear again, still on their stalks, when the ground is laid bare in the spring.

If the stranger extends his visit till the late autumn and winter he will make up his mind that the Barren Ground, with the exception of the few prolific months of long sunshine, has fully earned its reputation of being one of the most inhospitable regions of the earth. From early October till the middle of June the snow covers every vestige of fuel, the lakes are frozen to a thickness of many feet, and the rigour of the climate forces the animals to seek the shelter of the woods, and the birds to wing their way to some favoured southern land in search of food and warmth.

But to this rule there is one notable exception, for the musk ox (*Ovibos moschatus*), who finds his last abiding-place in this desolate corner of the earth, is quite indifferent to the changes of climate, knows no canon for hurry, and lives out his life in the Barren Ground probably under much the same conditions as his forefathers in the very early ages of

the world, when they roamed in their numbers over the whole northern portion of three continents. The musk ox's close relative, *Ovibos cavifrons*, was unable to survive, but the musk ox himself, although now restricted to this hardly accessible corner of the mainland of North America, part of Greenland, and the adjacent islands of the Arctic Sea, seems to have no difficulty in maintaining his existence at the present time. His immunity from danger is not gained by his own wariness, for he is easily approached by a human enemy, but by the fact that the country he inhabits is one full of difficulty and hardship to the hunter who wishes to kill a musk ox at the only season of the year when his skin is of any value, the season when he takes on the prime fur which enables him to withstand the awful cold of an Arctic winter.

It is true that the Indians, who hunt in the Barren Ground in summer, kill a large number of musk oxen for meat and for the hides which can be used for tanning when the caribou skins are so full of worm-holes as to be useless, and again slaughters are made in winter by means of organised expeditions provided with sleigh-loads of wood for fuel ; but the heart of the Barren Ground, which is the sanctuary of the musk ox, can never be reached by the Indians with the primitive fuel supply at their disposal. The distance from the woods is too great, and failure to find the game must inevitably end in starvation and a desperate retreat with uncertain results.

The only natural enemy of the musk ox appears

to be the wolf; but a full-grown animal should be quite capable of defending himself, and as the herds of caribou afford a much easier victim for a hungry wolf the musk oxen are seldom molested. There is a frequently published statement that these animals defend themselves against the attacks of wolves and of Indian dogs, which they may quite reasonably consider to be wolves, by adopting the square formation of an infantry regiment, with all the calves inside the square, but on the only occasions when I have seen them held at bay by dogs there has been absolutely no attempt at regularity of formation, and the calves were often to be seen in the forefront of an irregular group.

The natural increase of the musk oxen is small, as, from what I could gather from the Indians, the cows only calve every second year, and in all the herds which we came across during the summer months fully half the cows were unattended by calves.

The growth of the horns begins at an early age, and is at first in a vertical direction, as in a domestic calf; the downward bend does not appear till the second year, and the horns are not fully grown till the end of the third year. The horns of the bull grow into an almost solid boss on the top of the head, the frontal scalp being squeezed into a thin piece of tightly wrinkled skin filling a deep crevice between the horns. In the cows the horns do not approach each other at the base and are smaller in size, but have a similar downward growth, with an

increasing pressure on the cheek as the animal advances in age.

In winter, when the skins are prime, a thick piece of wool appears under the long hair, greatly increasing the weight of the hide, but this is all shed as the warm weather approaches, and may often be seen hanging in flakes on the rocks and small willow bushes. Nothing then remains except the long outside hair, and the skin in this state has no commercial value, so that it would be a profitless undertaking to hunt the musk ox for his skin during the few months when his country is easily invaded.

The food of this animal consists during the greater part of the year of a variety of mosses ; the snowfall is never exceedingly heavy, and the wind-swept hills have a very small covering even in the depth of winter. The musk ox paws away the snow, and has no difficulty in reaching his food. It is only in summer, however, that he puts on flesh, and he then feeds exclusively on willow leaves, which appear to give a great amount of nourishment. When he is engaged in this manner the musk ox is easily approached from behind within a distance of a few yards if the wind is favourable, as he considers himself quite safe, and does not find it necessary to glance frequently to the rear as is the habit of other animals. The big bulls wander about singly as a rule in summer, but the young bulls and cows generally run in small bands. Towards autumn the bands increase in size, and it is not uncommon to see forty or fifty animals together at this season of the year.

The Indians' method of hunting musk ox when a winter expedition is made is to round them up with sleigh dogs, and the number killed is only limited by the size of the herd and the carrying capacity of the sleighs. There is usually an autumn hunt early in November, and a spring hunt in April, as travelling in the Barren Ground is unendurable during the season of intense cold and little daylight, and, as I have mentioned before, a failure to find the game when the supply of fuel and provisions is exhausted is often attended with very grave results. The price paid for the hides at the Hudson's Bay Company's trading-posts is not remunerative, and the Indians reap a much better harvest by trapping marten and foxes in the shelter of the woods where the caribou afford a certainty of food. The musk ox hunt is therefore considered more as a trial of endurance suited to a young hunter anxious to display prowess attractive to the lady of his desire than as a business undertaking for the sake of gain.

In summer, of course, the killing is quite easy, but the Indians do not trouble the musk oxen much unless in need of skins for tanning, as the flesh of the caribou is preferable and easily secured by driving a band into a lake, and using the spear instead of wasting the precious ammunition. The musk oxen are, however, sometimes killed in this manner, but as these animals are unwilling and clumsy swimmers, the preparations for a drive are much more elaborate and more often miscarry than in the case of the caribou. The men must be stationed very carefully,

and show themselves at exactly the right time, so that the musk oxen suddenly find themselves surrounded without a chance of escape except by taking to the water. Usually a river or very small lake is chosen as the place of slaughter, for the animals would rather break back at any risk than undertake a long swim. They seem to have great difficulty in keeping their heads above water at all, and the final scene is extremely revolting to any man accustomed to more legitimate forms of sport.

The musk ox, although sometimes treated in this barbarous manner, is nevertheless an object of veneration to the Indian, and is supposed to be possessed of almost magical powers. His ferocious appearance has, no doubt, given rise to many superstitions in the mind of the credulous savage, and the desolate land he inhabits is well qualified to produce an endless supply of intangible horrors. There is no doubt that the Indian is actually afraid of a live musk ox, and never feels quite safe till he is well out of the Barren Ground, although my own experience goes to show that there is no more harmless beast on earth.

The Barren Ground is most easily reached by the Hudson's Bay Company's northern waterway furnished by the Athabasca, Slave, and Mackenzie rivers. Fort Resolution, on the south shore of the great Slave Lake, is perhaps the nearest starting-point for the musk ox country, but I believe that Fort Rae on the north shore would be a more convenient place, as it is within easier distance of the Barren Ground. Fort Good Hope, a long way down the Mackenzie, is

possibly the best place of all, as the scattered clumps of spruce timber stretch farther out into the open country in that district, and the great question of fuel supply would thus be more easily solved.

But whatever trading-post is selected as a starting-point, arrangements should be made six months, or better still, a year ahead, through the Hudson's Bay Company's officials at Winnipeg, as communication is infrequent in the north, and by this means only is it possible to avoid many of the vexatious delays which are sure to occur in procuring guides and supplies for a long expedition in search of musk ox.



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TO THE
AUTHOR



THE AUTHOR'S RECORD BEAR.



CHAPTER XVIII

THE BEARS OF ALASKA

By Captain C. E. RADCLYFFE

THE brown bears of Alaska are all of one general type. They are distinct from the grizzlies and other bears, and from the standpoint of any one who is not a professional mammalogist they might well be considered as forming one species. They are distributed from the vicinity of the British line at Portland Canal northward along the coast, and along the Alaska Peninsula, and are found on Uminak Island, but do not extend farther westward than this island. In the south-east they do not occur on Prince of Wales

Island, but are abundant on Baranof, Admiralty, and Chichagof Islands. They are found on Kodiak Island and the neighbouring smaller islands. They extend along the Bering Sea coast for some distance northward, but exactly how far is not yet definitely known. In the interior they probably range at least to the Yukon river, but very few specimens have as yet been brought from that region.

The following short list will give the distribution of the various sub-species as they are known to-day :

Ursus sitkensis occupies the south-east coast and part of the islands of the Alexander Archipelago.

Ursus dalli is found on the coast at Yakutat Bay, and doubtless somewhat farther north.

Ursus dalli gyas inhabits the Alaska Peninsula, and probably extends on down the coast to merge with the true dalli.

Ursus middendorffi is found only on Kodiak Island and the smaller islands immediately surrounding it.

Ursus kidderi frequents the same localities as *U. dalli gyas* on the Alaska Peninsula, and, so far as is known at present, does not differ from it in colour, but only in the size of its teeth, and certain cranial peculiarities.

The largest of all these bears is undoubtedly the *Ursus middendorffi*, but there is little difference between this and the *U. dalli gyas* as regards their size.

The first-named species is now getting rather scarce owing to the persistent persecutions of the natives on the islands which these bears inhabit. As regards the size of these animals, I have met with

some astonishing statements in print, such as that bears have been killed in Alaska measuring 13 feet from nose to tail, and having an estimated weight of 1800 lbs. or even 2000 lbs. But after collecting a mass of details, and travelling many miles in order to examine reported gigantic specimens of dead bears and their skins, I am satisfied that these statements are fables. No measurements of skins can be accepted as accurate, more particularly as the natives and hunters in Alaska have a habit of stretching the skins on pegs and frames, which give enormous measurements as the result. The largest specimen, of which I can vouch that the measurements and weight are correctly given, was a very old male of the *Ursus dalli gyas* which I killed on the Alaska Peninsula in June 1903. This bear, measured in a straight line between two upright sticks, from nose to tail was 7 feet 9½ inches, and the carcass when cut up and weighed, including the pelt, was 1014 lbs. The measurements from nose to tail, if taken outside the skin and following the curves of the body, were nearly 9 feet, and had the bear been killed earlier or later in the season when fat it would probably have carried another 100 lbs., or even 150 lbs., of extra weight. I measured both the skins and a large number of skulls of bears which were killed in Alaska during 1903. As the former amounted to well over 120 in number, and the specimen I have referred to was by far the largest of the lot, we may assume that it is a good average specimen of one of the largest Alaska brown bears.

The best hunting grounds for brown bears to-day in that country are along the Pacific and Bering Sea coasts of the Alaska Peninsula, in the Copper River country near Valdez, and on the mainland near Yakutat and Kayak.

The black bear, *Ursus americanus*, is found in considerable numbers all along the Alaskan coast, from the south up to a point on the Alaska Peninsula where the timber-line ceases. Beyond this to the westward it is not found, nor beyond the point where the timber-line ends on the north side. Both brown and black bears are more numerous near the coast than farther in the interior, and this is probably to be ascribed to the attraction of the salmon in the rivers and lakes near the coast. There are still a great number of black bears on the Kenai Peninsula. No restrictions are placed by law on the numbers of them which are allowed to be killed, and, therefore, any sportsman who devoted much time to hunting them might make a good bag in that district. The number of brown bears at present allowed to be killed by each sportsman is limited to four in one season.

Another species of bear, and one about which at present little is known, is the so-called blue or glacier bear, *Ursus emmonsii*. It is found in the neighbourhood of Mount St. Elias near Kayak, and inhabits high and inaccessible places on the mountains. Bears of this species are small in size, not being nearly so large as the black bear, and in colour the skins which I have seen resemble those of the silver fox.



A BLACK BEAR—ALASKA.

70 VINU
ABRACADABRA

Polar bears, *Ursus maritimus*, are found during the winter months on the islands of St. Matthew and St. Lawrence in the Bering Sea, also along the shores of the mainland throughout the northern parts of the Bering Sea, and extending along the Arctic coasts of Alaska.

If brown bears are the intended quarry of a sportsman who visits Alaska, he should be on the ground ready to commence operations not later than the first week in May, or, in an early spring, perhaps during the last week in April. By this time certain bare patches will be showing on the hill-sides, and here one may expect to find the bears when first they issue from their winter quarters in search of the earliest patches of young green grass. It is then that their pelts are in the best order. Long months spent whilst hibernating in the mountain caves render them at first very clumsy and weak on their legs, but strange to say, they emerge after this long fast remarkably fat. For a short time they will hang about the hill-sides, but with increasing strength a number of them will soon wander to the sea-shore. Here they come to search for clams and various kinds of fish which are cast up by the tide. In certain bays along the Alaska Peninsula there are great runs of the oolichan or candle-fish. Of these little fish the bears are exceedingly fond, and countless thousands are cast up on the beach by each high tide during the big run in May. There is a small bay on the Pacific side of the Alaska Peninsula, which lies a mile or more to the west of a spot marked Three Star Point on the chart, and near to Mitrofanía Island. Here

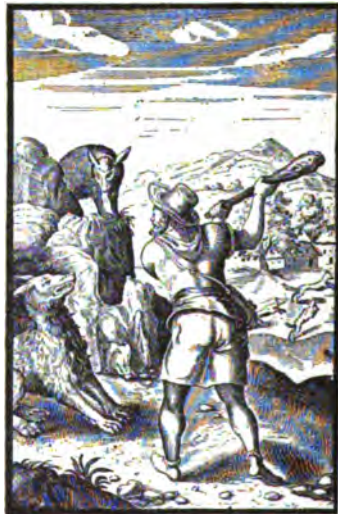
during the run of candle-fish I have known a case where two men who were hunting brown bears for the skin markets killed in a few weeks over thirty bears. This was within the last few years, and as far as I could discover, when visiting the spot recently, no one has been shooting there since this bag was made.

Undoubtedly the most enticing lure for these great brown bears is the big run of salmon, which begins early in June on most of the Pacific and Bering Sea rivers. It is then time that the hunter moved his camp to the banks of some river in which he knows the salmon to run, and where in consequence bears are plentiful. Daybreak and dusk are the favourite hours for bears to carry on their fishing operations. Having occupied a good point of vantage, whence he can survey a long stretch of the river above and below him, the hunter should keep his eyes or glasses constantly on the look-out for the welcome sight of those huge dusky forms as they come slowly wandering down from the mountain sides, or out of the dense, thick patches of alders which line the banks of the rivers. In such places will Bruin lie up during the daytime, secure alike from the eyes of man and the attacks of the vicious flies and mosquitoes, which he, together with his enemy man, holds in equal dislike. It is curious to watch the huge brutes approaching the river banks, cautiously and slowly advancing, ever and anon halting a while as they reach an open spot, listening and sniffing the air, to discover if possible the presence of any danger. Then, suddenly, when apparently certain

that the coast is clear, they begin fishing. A strange sight it is to see these ungainly brutes dash into the shallows of a river where the salmon are running in thousands, soon to return to the bank with a fish in their mouth. Here they dash off at once into the nearest patch of alders or high grass, where they devour the fish, leaving only the head and parts of the tail. This performance is repeated a number of times until they have caught sufficient salmon to satisfy their appetite. How many of the average-sized Alaskan red salmon are required to make a full evening meal for one of these bears, I am unable to say. But I have seen one bear catch and eat three or four fish whilst I have been in the act of stalking to within range before shooting at him. I have noticed one curious fact about the mode of fishing of these bears, and that is, that they always fish from the down wind side of a river, and there seem to catch the scent of the fish in some extraordinary manner. Therefore the hunter should always take up his position on the leeward bank, and any bear which approaches from the opposite bank will almost invariably swim across to the other side before commencing his fishing operations. By adopting this plan I have killed four large bears in five evenings on a river which flows into the Bering Sea.

A few maxims should always be borne in mind when hunting these beasts. First, they are exceedingly acute as regards their powers of smell and hearing. They are very short-sighted, but if you move in the open they are not slow to spot a man at

a good distance. They are, as a rule, timid, and will not attack unless wounded. An old she bear with cubs is always dangerous if molested, and the writer once nearly lost his life by tackling one in the open. Never follow wounded bears in thick bushes or high grass, as they have a nasty trick of following a well-worn trail, striking off either right or left of it, describing a semicircle, and then coming back to the trail, and lying down close to it watching for their enemy to advance. When following a wounded bear, and keeping his eyes fast on the ground, many a hunter has been killed by being suddenly surprised from behind. It is best to follow the tracks of such an animal on the next day, when he may be found stiff, or perhaps dead, in the place where he lay down.





CHAPTER XIX

THE MOOSE OF ALASKA

BY CAPTAIN C. E. RADCLYFFE

It is not only amongst the bear tribe that Alaska can produce the world's records, since of the Cervidae the *Alces gigas*, the moose of Alaska, is by far the largest living species of its kind. This species is acknowledged to be distinct from *Alces americanus*, which is found farther south in Canada and the United States. As regards their distribution in Alaska, moose may be said to extend to the very limits of the forest line. Outside of this, on the barren lands, they are not found. The best places

to hunt them in that country to-day are the Kenai Peninsula and certain places along the Yukon valley. To convey some idea of their size, I may state that I have killed a bull moose in the Kenai forests which measured nearly 80 inches, when lying on the ground, from the heel of its foot to the highest point of the withers, and I estimated its height, when standing, to be rather over 18 hands.

Mr. A. J. Stone, a well-known American naturalist, whom I met in Alaska, gave me the correct measurements of an adult bull moose which he had just killed, and stated that these might be accepted as the average dimensions of a good Alaskan moose. As he is a recognised authority on such matters, I quote his measurements in preference to any taken by myself.

MEASUREMENTS OF BULL MOOSE TAKEN BY A. J. STONE,
KENAI, 1903.

Length.	Tail.	Tarsus.	Femur to Humerus.	Across the Chest.	Height at Shoulder.	Height at Elbow.	Brisket.
in. 108	in. 6	in. 32½	in. 58	in. 21	in. 75	in. 40½	in. 40½

The weight of an old bull moose killed by my friend Mr. D. T. Hanbury, near our camp on the Kenai Peninsula in September 1903, was 1576 lbs. The largest authenticated pair of horns ever brought out of Alaska were those of a bull moose which was found dead in the Kenai river a few years ago, and

they measured slightly over 81 inches spread between the widest points. In 1903 I brought from the Kenai forests a pair of horns which measured when killed 77 inches, but which have now shrunk some two inches in span, as all large moose heads do when dry. This is certainly the second largest, if not the largest authenticated head which has so far been shot in Alaska.

During the season of 1903, on the Kenai Peninsula alone, there were twelve bull moose killed by the few sportsmen visiting that district, all of which bore heads exceeding 60 inches span, and three of them were over 70 inches. When we compare these measurements with those which were considered wonderful a few years ago by the old American and Canadian moose hunters, it gives some idea of the trophies which Alaska can produce to-day.

The open season for moose hunting now in Alaska is from 1st September to 31st December inclusive. The number of moose allowed to each sportsman is only two, and during the last two years only one moose from the Kenai Peninsula has been allowed.

In ordinary seasons on the Kenai Peninsula moose have lost the velvet from their horns by the end of the first week in September, the young bulls getting clean heads earlier than the old ones. I have, however, seen, in a late season, several heads which carried portions of velvet as late as 15th September, and one even on 20th September. The old bulls shed their

horns during December, but the young ones often carry them on into February, although the majority of these are shed in January.

The best time to hunt moose is during the rutting season, and this extends from about 15th September to 15th October.

The usual mode adopted when shooting moose in the Alaskan forests is that which is called "still hunting." As most sportsmen know, this is not a very wildly exciting or very difficult form of sport. All that is required on the part of the hunter are a good pair of eyes and ears and the power of creeping about quietly. For the rest, it is a matter of what the Americans call "bull-headed luck," as to whether or no a man gets a 70-inch or a 50-inch head on the occasion of his first shot at a moose.

The art of calling moose is not practised in Alaska by the natives. There is, however, one celebrated professional white hunter, by name Andrew Berg, who lives in a small cabin near Lake Tustumena on the Kenai Peninsula, and he can call up the bulls during the rutting season, but he is the only man in that district who can do so. This man does not use a birch bark horn, as the Canadian hunters do, nor does he, like the Canadians, adopt the cow's call to entice the bulls, but with his mouth he imitates the challenge call of the bulls. I have heard him repeat this call to perfection. Without the assistance of such a man as this, it becomes a question of still hunting. To use an Americanism,



MOOSE IN ALASKAN FOREST.



CAPT. RADCLYFFE'S LARGEST MOOSE.

"this is as easy as falling off a log." Continually creeping about, always working up wind, stopping here and there to watch some open glade for a time, on the chance of seeing a moose move into the clearing, is the best and only possible mode of procedure. A good pair of native mocassins are a useful aid to getting about quietly. Remember that two people always make more noise than one, and although two pairs of eyes and ears may be better than one, my own experience of the Alaskan natives, who are very poor hunters, is that they are better left in camp when stalking moose. Covering a great extent of ground in the day is not essential, and has the drawback that it is almost impossible to move quietly when going fast.

Moose at feeding time are always on the move, and when the bulls are running in search of cows they travel great distances and very fast. It is then that the man who has patience to stop all day in one place, watching a good moose trail, will often see the most moose in a day. I know an instance of a very old man who was hunting moose a few seasons ago on the Kenai Peninsula. He pitched his tent right on the shore of a lake, and never went two miles from his camp in any day. Yet he came out of that district with six very large moose heads, all killed by himself in a few weeks. The monotony of still hunting in the dense pine forests becomes terrible after many days of it. The incessant climbing over wind-fallen timber, or constant dragging

on by other writers there is surely something more than "vain repetition" in this account of the giant specimens of both kinds that Alaska produces.—
ED.]



through long wet grass reaching far above the waist, makes it an arduous and not very inspiring pastime. Early in the season myriads of vicious biting little flies, known locally as "grey stockings" or "moose flies," bestow their attentions on the hunter. With the exception of moose, black bears, a few owls, and spruce grouse, etc., the forests of Alaska are one vast solitude in which animal and bird life are seldom seen. At night, save for the hooting of a few owls, and occasionally the clash of horns, as two lordly monarchs of the forest indulge in fierce strife, little is heard to disturb the reveries of a hunter as he sits before the dying camp-fire before turning in for the night between his blankets.

For some of us there is a subtle charm in this life, surrounded by the mystic teachings of wild nature, the magic of the woods, and the hidden secrets of silent wastes or mournful waters, which appeal only to dreamers of the intangible, and ever remain a closed book to those who in youth have lacked sympathy with the fantasies of Fairyland and the unknown.

[Acknowledgment has to be made to Captain Radclyffe for kind permission to use the pictures facing pages 267 and 278, which have already appeared in his own book, *Big Game Shooting in Alaska*, published by Mr. Rowland Ward. Captain Radclyffe's trip was so recent and so successful that the hints he has been able to give to the next visitor to the same region cannot but be valuable, and although both moose and bear have been touched

on by other writers there is surely something more than "vain repetition" in this account of the giant specimens of both kinds that Alaska produces.—
ED.]





CHAPTER XX

AMERICAN AND CANADIAN GAME LAWS

By CLIVE PHILLIPPS-WOLLEY

MR. RUDYARD KIPLING, whose power of hitting the very heart of any matter passes man's understanding, whether that matter be a polo pony or the character of a great nation, has written of the American that "the cynic devil in his blood" bids him "flout the law he makes" and "make the law he flouts," and, as a rule, perhaps this is true. But it is not true always; though even in the exception, the American insists upon remaining a paradox. He is the most free, he says, of men; and yet he makes good game laws, and insists upon their being kept. Besides that cynic devil in his blood, there is in it also a good

deal of that wicked game-preserving squire who has so often been held up to scorn by Uncle Sam.

In America the game-preserving spirit was never more active than it is at present, nor is the reason of that activity far to seek. Until comparatively recent years every one upon the continent was too busy making a fortune to have any time for amusements; but to-day a class has arisen which has inherited fortunes ready made, and in looking round for the best that the world can give, has gone back to the primitive amusement of its forefathers.

The popularity of such books as are written by Seton Thompson and C. D. Roberts, and poorly imitated by others, is at once an outcome and a cause of the wave in favour of game preserving. The spirit of sport (not butchery) took such men to the woods, and the publication of their beautiful pictures of woodland life has moved the mind of the people in favour of a more stringent protection of their little neighbours. In addition to these general causes there are certain very powerful special agents which have made and are still making for the protection of game; and the President of the United States will not think me impertinent if I only put him second to those great societies, with which I believe he was always connected—the League of American Sportsmen, and the Boone and Crockett Club of New York: societies of which such men as the President himself, Mr. G. O. Shieds (perhaps the most energetic of game preservers), Mr. Seton Thompson, and Mr. Hornaday (the well-known

artist and naturalist) are not only vice-presidents but active members.

Like everything in America, these societies are run on a very large scale, the membership of the League being so great as to make the society very seriously felt by all would-be politicians. The League, indeed, according to the last records in my possession, has working divisions in twenty-four States of the Union and two of the provinces of Canada.

The result of such united effort as these figures represent is that these societies have, amongst other things, practically stopped the sale of bird-millinery in New York, repealed the cold-storage law of that State, obtained the enactment of the splendidly effective Lacy law, and, as one of the vice-presidents writes me, has "bird destroyers and big-game slaughterers on the run and the game dealers actually on their knees."

There is only one thing to be said against these gentlemen, and one that those who suffer from it most should be the last to say. It is that their zeal is so unflagging that it is not easy to keep yourself up to date with the ever-growing provisions of the game laws in the various States.

What follows is an attempt—made possible only by the extreme courtesy of the different heads of the departments—to record for the benefit of English visitors the close times, licenses, and other matters which most directly concern them. It is to be hoped that the sportsmanlike spirit which has dictated such laws, the courtesy which is always ready to supply

Day of California



SURVIVORS.

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all possible information regarding them, and the kindness which has always been shown in granting permits and exemptions from the general laws, may meet with a better return from our countrymen than has sometimes been the case.

And this applies equally to Canada. We make our elder brothers very welcome here, we extend to them privileges which we should not dream of receiving from them if we went back home ; but we expect them to keep our few laws, and contribute to our game-preserving fund by paying their licenses, just as we should be obliged to observe theirs and pay their license fees at home. I should like to repeat what I wrote in the Badminton volume a good many years ago to the effect that the recklessness of one man, in a country where members of his nationality are few, may suffice to damn a whole nation in the eyes of a people against whose laws the individual offends.

If I were asked to put the game law of the American continent into a nutshell, as it ought to be, as the vast bulk of the people want it to be, and as it undoubtedly will be some day, it would come in the main simply to this, "Thou shalt not sell game." As a proof of this, I may point to the fact that the League has secured the passage of bills in sixteen States of the Union to prohibit the sale of game at all times ; and even in Western Canada, where our little provincial legislatures used to treat the game law as a toy for the utterly ignorant to play with, the laws are growing more and more prohibitive as

regards the sale of game, though they are no better enforced now than they used to be.

In countries of such enormous area as British Columbia, a law absolutely prohibiting the sale of game, game trophies, and hides is the only law which would avail anything. No other law could be enforced whilst the game, which is such a valuable asset to us as a musketry instructor to our young men, as a food-supply to our pioneers, and as a bait for the class we most want as settlers amongst us, is still sufficiently plentiful to hold its own for very many years, even with such a small measure of protection as this.

The following is a synopsis of the most important provisions dealing with big game in the various States of the Union and provinces of the Dominion, brought up to the date of the latest bulletins procurable in December of 1904; but though these should suffice to decide the choice of a shooting ground, full inquiries should be made locally upon the sportsman's arrival, to provide against changes made subsequent to 1904, and county laws, for the record of which I have no space.

In *Alabama* the close season for deer is from Jan. 1 to Sept. 1. It is illegal to shoot on Sundays or to kill deer in the water.

In *Alaska* the close seasons are: for deer, Feb. 1 to Aug. 1; for moose and mountain sheep, Jan. 1 to Sept. 1; for caribou, Nov. 1 to Sept. 1 (except on the Kenai Peninsula, where they are protected until 1908, and in the Yukon, where the close season is

Jan. 1 to Sept. 1); for mountain goat, Jan. 1 to Aug. 1; for large brown bear, Jan. 1 to April 1. No license is required, but the bag is limited to 2 moose, 4 each of caribou, sheep, goat, and large brown bear, and 8 deer per man p.a.

The Kenai Peninsula is, I understand, closed as a shooting ground, except to those having special permits.

In *Arizona* the close time for bucks is Nov. 1 to Sept. 15. No antelope may be shot until Jan. 1, 1906, and all other game is protected absolutely. Three deer may be shot in a season; one only in a day.

In *Arkansas* the close season for deer is Feb. 1 to Sept. 1.

In *California* the close season for bucks is Nov. 1 to July 15. All other game is protected at all times. Three deer are allowed in the season.

In *Colorado* the close season for bucks is Oct. 1 to Sept. 15; wapiti, antelope, and mountain sheep may not be shot until 1907, and buffalo are protected at all times. A \$25 license is issued to non-residents, and the "bag limit" is 1 deer p.a.

In *Connecticut* deer are protected until 1911.

In *Florida* the close season for deer is Feb. 1 to Nov. 1. Non-residents pay a \$10 license and may kill 5 deer p.a.

In *Georgia* deer are protected from Jan. 1 to Sept. 1.

In *Idaho* the close season for deer, wapiti, antelope, mountain sheep, and goat is Jan. 1 to Sept. 1; moose,

caribou, and buffalo are protected at all times. Non-residents are charged \$25 for a license, and are limited to 2 deer, 1 ibex (*sic*), 1 goat, 1 sheep, and 1 elk (wapiti?) per man per season.

In *Illinois* deer are protected until 1913.

In *Indiana* deer are protected at all times. The same applies to all big game in *Iowa*, whilst in *Kansas* antelope are protected until 1908. Nothing is said in my authority about deer in *Kansas*.

In *Kentucky* the close season for deer is March 1 to Sept. 1, and non-residents are charged the same fee for shooting in *Kentucky* which *Kentuckians* would be charged in the State of the non-resident.

In *Louisiana* the season for bucks varies locally. There is a \$10 license, and the limit is 6 deer.

In *Maine* it is specially advisable to look out for local exceptions. The general rule as to close time is: deer, Dec. 16 to Oct. 1; bull moose, Dec. 1 to Oct. 15. Caribou are protected until Oct. 15, 1905. Non-residents pay a \$15 license fee and are limited to 1 moose and 2 deer in a season.

In *Massachusetts* deer are protected for five years.

In *Michigan* the close season for deer is Dec. 1 to Nov. 8; elk (wapiti?), moose, and caribou are protected until 1911; a non-resident is charged \$25 and is allowed 3 deer in one year.

In *Minnesota* the close season for deer, bull moose, and bull caribou is Dec. 1 to Nov. 10; all females protected; license \$25; limit, 3 deer, 1 moose, and 1 caribou.

In *Mississippi* the close season for deer is March 1 to Sept. 15.

In *Missouri* the close season for deer is Jan. 1 to Oct. 1.

In *Montana* the close season for deer and mountain goat is Jan. 1 to Sept. 1; for elk (wapiti?) Nov. 1 to Sept. 1; everything else is protected altogether. The license fee is \$25, and the limit is 6 deer, 2 elk, and 6 goats.

In *Nebraska* bucks and antelope are protected from Nov. 16 to Aug. 15; hinds and wapiti at all times. There is a \$10 license, and the limit is 1 deer and 1 antelope, or 2 of either kind, in a season.

In *Nevada* bucks and male antelope are protected from Nov. 15 to Sept. 15; all other big game protected altogether. There is no license fee, but the limit is 3 deer and 3 antelope.

New Hampshire is controlled by county laws.

In *New Jersey* deer are protected until April 1906.

In *New Mexico* bucks are protected from Jan. 1 to Nov. 1; elk, antelope, and mountain sheep until March 7, 1905. There is no license fee, but the limit is 1 deer.

In *New York* State deer are protected from Nov. 16 to Sept. 1, but there are numerous county exceptions; black bear from July 1 to Oct. 1. The same license fee is charged which citizens of New York pay in the State of the non-resident, and if there is no fee there it is fixed by a commissioner.

In *North Carolina* the close season for deer is

Jan. 1 to Oct. 1 ; there is a \$10 license but no limit.

In *North Dakota* the close time for deer is Dec. 1 to Nov. 10 ; all other big game is protected at all times, except antelope, which are protected until 1911. A \$25 license fee is charged, and the limit is 5 deer.

In *Oklahoma* all big game is protected.

In *Oregon* deer, moose, antelope, and mountain sheep are protected from Nov. 1 to July 15, with four county exceptions. Wapiti are protected until Sept. 15, 1907. There is a \$10 market-hunting license and no export allowed.

In *Pennsylvania* deer and elk (?) are protected from Dec. 1 to Nov. 1. There is a \$10 license fee, and a limit of 2 deer a season.

In *Rhode Island* deer are protected until Jan. 1, 1908.

In *South Carolina* there are many county exceptions, but the general close season for deer is from Jan. 1 to Sept. 1. There is no license fee and no limit.

In *South Dakota* the close season for deer, elk, buffalo, and mountain sheep is Dec. 15 to Nov. 15 ; antelope are protected until Jan. 1, 1911 ; the big game license costs \$25, and the limit is 3 deer, 1 elk, 1 buffalo, and 1 sheep in a season.

In *Tennessee* the close season for deer is Dec. 15 to Oct. 1 ; there is no limit, and the license is the same as paid by a citizen of Tennessee in the non-resident's State.



COLORADO DEER.

TO VIND
ADVENTURE



CROSSING THE RIVER.

In *Texas* bucks are protected from Jan. 1 to Nov. 1; hinds altogether, and antelope and mountain sheep until July 1, 1908. Six deer in a season is the limit; no license fee.

In *Utah* the close season for bucks is Nov. 1 to Sept. 1. Hinds, elk, buffalo, antelope, and sheep are protected at all times. There is a \$10 license fee, and the limit is 2 deer.

In *Vermont* bucks are protected from Nov. 1 to Oct. 22; hinds, moose, and caribou at all times. There is no license fee. The limit is 1 deer in a season.

In *Virginia* deer are protected from Jan. 1 to Oct. 1. There is a \$10 license fee but no limit.

In *Washington* the close season for deer is Dec. 15 to Sept. 15; for bull wapiti, moose, caribou, antelope, sheep, and goats, Nov. 1. to Sept. 15; females (except deer) at all times. The license fee is \$1, and the bag limit 4 deer, 1 wapiti, 1 moose, 1 antelope, 1 caribou, 2 sheep, and 2 goats in a season.

In *West Virginia* deer are protected from Dec. 16 to Oct. 15. The license fee is \$15, and the limit is 2 deer.

In *Wisconsin* deer are protected from Dec. 1 to Nov. 11, but there are many county exceptions to the general rule. The license fee is \$25, and the limit is 2 deer.

In *Wyoming* deer, elk, antelope, mountain sheep, and mountain goat are protected from Nov. 15 to Sept. 15. Moose are protected until Sept. 15, 1912.

The license fee is \$50, and the limit 2 deer, 2 elk, 2 antelope, 1 sheep, and 1 goat in the season.

In *British Columbia* deer, sheep, and goats are protected from Dec. 15 to Sept. 1; fawns, ewes, and lambs at all times; bull wapiti, bull moose, bull caribou, Jan. 1 to Sept. 1, but in the Kootenay country wapiti are protected until May 16, 1907. Females and young are protected at all times. The license fee is \$50, and the limit is 10 deer, 2 wapiti, 2 moose, 5 caribou, 5 goats, and 3 sheep.

In *Manitoba* deer, wapiti, moose, caribou, and antelope are protected from Dec. 15 to Nov. 15. All females are protected at all times. The license fee is \$25, and the limit 2 deer, 2 wapiti, 2 moose, 2 caribou, and 2 antelope.

In *New Brunswick* deer, moose, and caribou are protected from Dec. 1 to Sept. 16; cow and calf moose at all times. The license fee is \$30, and the limit 2 deer, 1 moose, and 1 caribou.

In *Newfoundland* wapiti and moose are protected until Jan. 1, 1912; caribou from Feb. 1 to Oct. 21. The license fee is \$50.

In *North-West Territories* deer, wapiti, moose, and caribou are protected from Dec. 15 to Nov. 1; antelope from Nov. 15 to Oct. 1; buffalo at all times; mountain sheep and goats, Dec. 15 to Oct. 1; big game in S.E. Assiniboia, Dec. 15 to Dec. 1, and females and young at all times. The license fee is \$25, and the limit 3 deer, 3 wapiti, 3 moose, and 3 caribou.

In *Nova Scotia* deer and caribou are protected

until Oct. 1, 1905 ; moose from Jan. 1 to Sept. 15. The license fee is \$40, and the limit 2 moose.

In *Ontario* deer are protected from Nov. 16 to Nov. 1 ; wapiti at all times ; moose and caribou from Nov. 16 to Oct. 16, except south of Canadian Pacific Railway between Matawa and the Manitoba boundary, where the close season is Nov. 16 to Nov. 1. Females and young are protected, except those of deer. The license fee is \$25, and the limit 2 deer, 1 moose, and 1 caribou.

In *Quebec* deer and moose in Zone 1, g., are protected from Jan. 1 to Sept. 1, except in the Ottawa and Pontiac counties, where the close season is from Dec. 1 to Oct. 1. Caribou are protected from Feb. 1 to Sept. 1 ; bear from July 1 to Aug. 20. In Zone 2 the close seasons are the same, except that the close season for caribou is March 1 to Sept. 1. The license fee is \$20 for big game, and the limit in Zone 1, 2 deer, 2 caribou, and 1 moose, and in Zone 2, 4 caribou.

In *the unorganised territories* (Keewatin, etc.) deer, wapiti, caribou, mountain sheep, and goats are protected from April 1 to Dec. 1, except July 15 to Oct. 1. Musk oxen are protected from March 20 to Oct. 15. There is no license fee and no limit, nor, I imagine, any law except upon paper. As it stands, it is a curious close time.

In *the Yukon*, deer, wapiti, moose, caribou, mountain sheep, goats, and musk oxen are protected from Jan. 1 to Oct. 1 ; buffalo at all times.

The foregoing list of laws with regard to big game

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hunting may seem very formidable, but that they are more than mere laws upon paper is shown by the fact that, in 1903, 3336 big game licenses were issued to non-residents in nine states and four provinces, at a cost to the non-residents of \$72,295.

Special permits are required in many cases for shipping specimens out of the country, but especial exception to this restriction is made in regard to the skins of the Alaskan bears by a regulation of June 1904. On the other hand, much dissatisfaction has been caused by the operation of the present game law in Alaska, and, pending the expected passing of a Repeal Act, the Secretary of the Department that has control is very chary of issuing permits.



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